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And now... MISS WORTH LES PARFUMS WORTH - PARIS

FINANCIAL TIMES

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NEWS SUMMARY

GENERAL Israel lifts ban on land buying

Labour struggle Left-wing activists are pressing for representatives of local constituency parties to play a full part in the proposed inquiry into the Labour Party's structure and organisation.

President quits Afghanistan's First Minister, Bakhtyar Amin, has taken over leadership of the country from President Noor Mohammed Taraki because of Taraki's poor health, Kabul Radio reported.

Botha backlash South African Premier Pieter Botha today faces a right-wing backlash within the ruling National Party against his administration's cautiously reformist approach when he opens the party's Transvaal Provincial Congress.

Pope's venue The key address of Pope John Paul's visit to Ireland at the end of the month is expected at Drogheda, 36 miles south of the Ulster border.

TV plan backed The Independent Television Companies' Association welcomed Home Secretary William Whitelaw's framework for a fourth television channel, and backed his rejection of competitive advertising to gain revenue.

UN man quizzed United Nations diplomat Prince Alfred Zre-Lippe-Weissenfeld arrived in Geneva to discuss with senior officials how he acquired valuable antiquities seized from his Nicosia home by Cypriot police.

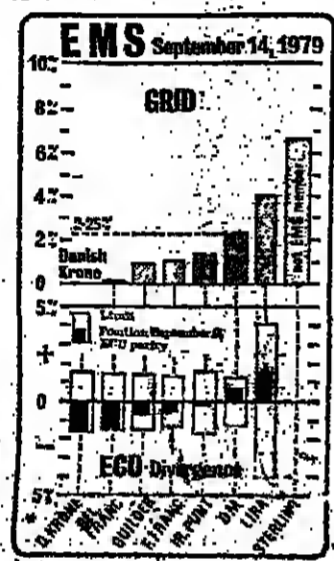
Rugby threat Anti-apartheid campaigners have threatened to place "under siege" the South African Barbarians if the Government allows the rugby team's planned tour of Britain to go ahead.

Tennis death call British Davis Cup tennis champion Paul Hutchings disclosed in Rome that there had been an anonymous threat against the life of a member or members of his team, Britain lost the European zone A final 4-1 to Italy, John Barrett, Page 17

Briefly Bombs badly damaged two Government buildings in Paris, but no casualties were reported. Eight East Germans—four of them children—died to West Germany in a hot air balloon. London Mercantile Holdings chairman Godfrey Bradman has given £13,508 to World Vision for its Vietnamese boat people rescue mission. Remains of Duchess of Nemours, a first cousin of Queen Victoria, have been exhumed from a church in Weybridge, Surrey, and taken to France. John Pritchard is to succeed Sir Charles Mackerras this autumn as chief guest conductor of the BBC Symphony Orchestra.

Business Danish move to aid krone

THE DANISH National Bank has raised its discount rate by 2 per cent to 11 per cent from today in an attempt to relieve the pressure on the krone in the European Monetary System. Substantial support was given to the Danish currency by the Danish Central Bank and the German Bundesbank during the week as the krone fell below its lowest permitted limit against the D-mark under the terms of the EMS. Other members continued to suffer from the strength of the D-mark. Paris interest rates rose sharply as a result of action by the Bank of France, and on Friday the French authorities sold D-marks and dollars to defend the franc. Rumours of an impending revaluation of the D-mark within the EMS contributed to a sharp fall in sterling, which declined to its lowest level since the end of June.



The chart shows the two constraints on exchange rates within the European Monetary System: the 'grid' of cross rates from which no currency (except the D-mark) may move more than 2 1/2 per cent, and the varying degrees by which each currency is allowed to deviate from the central rate against the European Currency Unit (ECU), itself a basket of European currencies. The D-mark is always shown by reference to the weakest currency in the system, which is the base in the top chart.

Nkomo says Front may accept reserved seats for whites

BY BRIDGET BLOOM AND MICHAEL HOLMAN

The Patriotic Front is prepared to accept British demands that Rhodesia-Zimbabwe's 250,000 white minority should have specially reserved seats in a new Parliament. But there are signs that the Muzorewa Government is itself divided on this issue.

On the eve of the second week of the Lancaster House talks Patriotic Front co-leader Mr. Joshua Nkomo declared that his party was in principle opposed to special privileges for whites. For this reason, he said, the Front's outline constitution submitted to the conference on Friday contained no such provisions.

But if in the current constitutional negotiations Britain "wants to introduce racism" by insisting that the white minority should have reserved Parliamentary seats, "then they will have seats," Mr. Nkomo said.

Mr. Nkomo's remarks were made a few hours after Bishop Ahluwalia Muzorewa, leader of the Salisbury delegation to the talks, had given Rhodesian whites a broad hint that his delegation, too, was prepared to make compromises on a future constitution.

Under a direct black leadership, he said in a radio broadcast to Rhodesia, whites had nothing to fear. The example of Kenya showed that what whites "considered as safeguards were not really important after all."

However, hopes that the second week of talks in Lancaster House might see agreement on a constitution were severely tempered last night by the fundamental differences which remained between the two sides.

Boost for wealthy under Labour

By Peter Riddell, Economics Correspondent

THE distribution of personal wealth in the UK became more unequal under the last Labour Government than had previously been believed. This is indicated by Inland Revenue Statistics for 1979, published this morning. The figures also show the relatively small number of people paying tax at the top marginal rates before the Budget changes.

The most wealthy 10 per cent of the adult population increased their share of total personal wealth from 57.5 to 61.1 per cent between 1974 and 1977. At the same time the

DISTRIBUTION OF PERSONAL WEALTH. Percentage of total wealth in UK owned by most wealthy sections of adult population

Source: Inland Revenue Statistics

share of the least wealthy 50 per cent fell from 7.1 to 5 per cent. This was in contrast to the period of Conservative Government in the early 1970s when the distribution of wealth became slightly more equal.

The paradox can be partly explained by the sharp fall in ordinary share prices in 1973-1974 and the subsequent big recovery in 1975-76. This is because only the richest few per cent of the population have significant holdings of ordinary shares.

The new 1977 estimates confirm the findings of the recently wound-up Diamond Commission on the Distribution of Income and Wealth, whose figures went up only to 1976. These showed that, while the share of wealth of the top 10 per cent had stopped declining since the mid-1970s, there had still been a very large fall in the last 20 years.

The estimates are based on capital transfer tax statistics which do not include the values of accrued pension rights or other non-marketable assets. The new statistics also show that only 36,000 married couples or single people were liable to income-tax at a marginal rate of 83 per cent in 1978-77. This is a very large fall in the last 20 years.

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Oil effects worse than feared—IMF

BY JUREK MARTIN, U.S. EDITOR, IN WASHINGTON

THE GOVERNMENTS of the major industrialised countries have little alternative but to continue to employ the same policies which have, over the last three years, failed to improve the global economic position, the International Monetary Fund has concluded in its annual report, published in Washington yesterday.

They will have to do so in a markedly deteriorating economic climate. The IMF finds that the impact on both inflation and growth of this year's round of oil price increases has been greater than previously estimated.

It is widely felt that the economic calculations contained in the annual report, which was drawn up in mid-summer, may already be outdated. The IMF's board met last week to consider a draft report on the world economic outlook which will be presented at the annual meetings of the IMF and the World Bank in Belgrade at the start of next month. This one, it is understood, is even more pessimistic than the report released yesterday.

The IMF haldy states that the "gradualist" approach it has prescribed since 1976 has been "too gradual." The reasons for the failure are many, the report says, but perhaps the basic one has been the pursuit of policies that have failed to make a dent in inflationary expectations. The IMF

Ministers meet

Finance Ministers and central bank governors from the five major industrialised countries met in Paris yesterday in conditions of the utmost secrecy, in preparation for next month's International Monetary Fund/World Bank meeting in Belgrade.

The sharp worldwide rise in interest rates, the soaring gold price and plans to dilute the U.S. dollar's reserve role were the main topics in the talks, bringing together the U.S., Britain, West Germany, France and Japan.

Strike talks begin

BY PHILIP BASSETT, LABOUR STAFF

THE TWO sides in the engineering dispute meet today with the Advisory, Conciliation and Arbitration Service. The industry's third two-day strike over pay was due to begin this morning.

The response to today's action is likely to be important to the outcome of the meeting. It has been called by ACAS to see if an agenda for a more formal meeting can be agreed for Wednesday.

Attention is expected to focus particularly on Rolls-Royce, where the management has said it will lay off its 30,000 manual workers indefinitely if they fail to turn up for work today and tomorrow.

Neither unions nor management were predicting with confidence what was likely to happen. One senior company official said that so many workers were faced with divided loyalties that it was impossible to estimate the response.

The dispute is over a union claim for a national minimum craft rate of £90 a week, one hour off the working week this year, two days' extra holiday, and a common implementation date for the agreement.

The main union involved, the Amalgamated Union of Engineering Workers, opens a two-day national conference today at Eastbourne. It is expected to be dominated by discussion on closer links between the sections.

More at stake than a strike, Page 19

Talks today on Britain's EEC payments burden

BY GUY DE JONQUIERES, COMMON MARKET CORRESPONDENT

BRITAIN WILL urge its EEC partners today to decide soon on measures to achieve a rapid reduction of the mounting deficit on its contributions to the European Community budget.

Sir Geoffrey Howe, Chancellor of the Exchequer, will tell other EEC Finance Ministers in Brussels that there can now be no denying that there is a substantial gap between what the UK pays to Brussels and the sums it receives in the shape of Community spending.

The Chancellor will emphasise that his Government's own calculations are backed up by a new report from the European Commission. This forecasts that Britain's net budget contributions will exceed £1bn next year, making it by far the biggest net contributor.

by the rise of almost 14 per cent in EEC agricultural spending resulting, from last summer's farm price settlement. Although the UK is a heavy contributor towards its cost it will receive only a small fraction of the benefit, most of which will go to France and Germany.

Sir Geoffrey is expected to face a sceptical audience, however. France, in particular, has indicated that it intends to take a hard line over Britain's demands, and will strongly resist any move that might jeopardise EEC farm spending.

North Sea oil In recent bilateral discussions with the British Government, the French authorities are understood to have made clear that they are reluctant to offer any budget concessions unless the UK is prepared to grant France privileged access to North Sea oil. However, that possibility has been ruled out by Britain.

It is doubtful, too, how far Germany will be ready to go in advance of next year's elections to seek budget reforms, which would inevitably cost Germany more.

Drawing up No firm decisions are likely to emerge from today's meeting, which is intended to guide the European Commission in drawing up specific proposals for budget reforms. These will be discussed by EEC government leaders at their next summit in Dublin at the end of November.

The ministers will also seek to align their positions before the annual meeting of the International Monetary Fund in Belgrade in 10 days' time. Britain's share of the EEC budget, Page 18

U.S. turns down Chrysler's formal request for \$1.2bn aid

BY JUREK MARTIN, U.S. EDITOR, IN WASHINGTON

THE U.S. Government has dismissed as "way out of line" Chrysler's first formal request for \$1.2bn (£570m) in immediate and stand-by federal loan guarantees.

However, both Mr. G. William Miller, the Treasury Secretary, and Mr. John Riccardo, the ailing car company's chairman, held out the hope that further negotiations would be successful.

Major issue Mr. Miller made it clear that the Government's commitment to Chrysler would be held to well below \$1bn and that the company would have to improve other aspects of its "preliminary" plan before agreement could be reached.

In another major issue involving the car industry, administration officials have expressed relief that the economy, already in the throes of a recession, would not be further damaged by a protracted strike by the car workers' union against General Motors, the leading manufacturer.

The union and GM reached a tentative wage settlement late on Friday night, only hours before a strike deadline was reached. Details of the new contract have not been released, but Mr. Riccardo, President Carter's chief inflation fighter, said that, by itself, "avoiding a strike is clearly a good thing for the economy in the long run."

GM contract It has been clear for some time that, with inflation running at more than 13 per cent a year, the old standards, calling for observance of a 7 per cent plus wage ceiling, are out of date. Nevertheless, the industry's impact of a substantial car industry settlement may be considerable.

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CONTENTS UK and EEC budget: Testing time ahead 18 Britain: What is at stake in the engineering dispute 19 Management Page: Ulster industrial competition 12 Editorial comment: Wages in Italy; BBC finances... 18 Lombard: Samuel Brittan on myths about the IMF 16 Surveys: Murchison production platform 8-11 Computer services 27-32 European bonds Inset

OVERSEAS NEWS

# Hong Kong growth forecast at 12 per cent

BY PHILIP BOWRING IN HONG KONG

Hong Kong's gross domestic product is now likely to grow by 12 per cent in real terms this year compared with the original estimate of 7 per cent, according to Mr. Philip Haddon-Cave, the Financial Secretary.

This would make the fourth successive year that growth has been in double figures. But this year, inflation will also be in double figures, with latest estimates of consumer prices rising 11 per cent and prices overall by 14 per cent.

The better than expected growth rate has been made possible largely by a dramatic 6.4 per cent increase in the population, compared with an expected 2 per cent due to the newcomers, from China and Vietnam.

The additions to the workforce helped manufacturing industry meet a sharper than expected increase in export demand, particularly from the UK and West Germany, where first half sales showed increases

in real terms of 42 per cent and 28 per cent respectively. These have more than offset weakness in the U.S. market.

Overall domestic exports are now expected to rise 13 per cent in real terms, and re-exports at 27 per cent.

Imports, according to Mr. Haddon-Cave, are likely to rise less quickly, leading to some improvement in Hong Kong's currently very large merchandise trade deficit.

Exports have been helped by the sharp decline in the Hong Kong dollar and reduced pressure on wages as a result of the labour inflow.

Mr. Haddon-Cave criticised the inflow as impeding adjustment and elimination of excess demand, but without it the badly needed shift of resources to exports could not have taken place. Domestic demand has remained at a very high level, fuelled by 40 per cent plus rate of bank lending increases.

The tenor of Mr. Haddon-Cave's speech was generally

more optimistic than of late, suggesting that the economy is on the way back to equilibrium after a period of rapid inflation and currency weakness.

However, he glossed over the chief economic topic here at present—the banking sector and the continuation of large month-to-month lending increases.

Many had been expecting the announcement of new liquidity and other provisions for banks and deposit taking companies. But these are still under review.

# Attitudes harden in Rotterdam port strike

By Charles Batchelor in Amsterdam

THE STRIKE of tugboat crews and dockers which has severely hampered cargo movements in the port of Rotterdam for the past 3½ weeks shows no signs of coming to a speedy end. The strikers' attitudes hardened over the weekend, with both groups calling for separate meetings for an extension of the strike.

The stoppage, involving about 500 men manning tugs belonging to the port's largest operator and more than 7,000 dockers, has badly hit general port business. Many vessels have been diverted to other ports and others have been forced to negotiate the 12-mile-long estuary without assistance.

More than 300 of the tugboat men yesterday decided to extend their action. The committee co-ordinating the dockers' strike was due to meet yesterday evening to decide on further moves after a mass-meeting of 2,500 dockers voted to extend the strike on Saturday.

The strike, the most bitter in recent Dutch labour history, has provoked scuffles on picket lines and has brought calls for tougher action by the police to prevent violence.

Offers of mediation by the Socialist Mayor of Rotterdam and from Mr. Wim Kok, the leader of the FNV trade union federation, have been rejected.

# Israeli cabinet agrees to West Bank land sales

BY DAVID LENNON IN TEL AVIV

THE ISRAELI Government decided yesterday that Israelis will be allowed to buy land in the occupied West Bank and Gaza Strip, which are destined to become a Palestinian autonomous region under the Camp David peace accords.

At the same time, the Cabinet stated that this would not entitle the purchasers to build Jewish settlements on the land without Government permission.

The reasons for the decision were not immediately known, and it appears highly unlikely that many Palestinians would be willing to sell. Jordan, which formerly ruled the West Bank, regards the sale of any land there to Israelis as a capital offence.

There have been some cases where land was sold to public institutions by West Bank people who then emigrated to avoid the wrath of their fellow Palestinians. Until now, private Israeli citizens were prohibited from buying land in the occupied territories.

The Government is facing increasing pressure from Jewish settlers to expropriate more land for them. Settlers whose villages were built in the midst of privately-owned Arab land have been most vociferous in demanding that land be made available.

The Cabinet also rejected an appeal by Prof. Yigal Yadi, the Deputy Prime Minister, against a recent Cabinet decision to build two new Jewish settlements on the West Bank.

It was announced yesterday that work had been completed on an approach road to a new settlement east of Jerusalem and that a number of caravans

had been moved on to the site. The settlement is being built on land seized from the Arab village of Anata. The High Court yesterday rejected an appeal by the Palestinian villagers against the expropriation of the land.

Meanwhile, the police detained one Arab in Jerusalem in connection with the murder on Saturday night of an Israeli whose car broke down in Arab East Jerusalem. The police say they are certain the shooting was the work of Palestinian guerrillas.

Jurek Martin adds from Washington: A decision on the possible joint production by Israel and the U.S. of fighter aircraft will be taken in the next two to three months. Mr. Ezer Weizman, the Israeli Defence Minister said here.

After talks with U.S. officials, principally Mr. Harold Brown, the Secretary of Defence, Mr. Weizman denied that Mr. Brown would back such a proposition. He also refused to comment on which aircraft might be involved, though speculation here has centred primarily on the F-16 and F-15.

Mr. Weizman also confirmed that Israel was asking the U.S. for \$1.8bn in assorted military aid in the next fiscal year, a sharp increase on the existing \$1bn programme. But he added that he did not expect to get all of the increment. Israel, he argued, had not come up with a new arms shopping list over and above what he had discussed with Mr. Brown last February.

# Botha faces right-wing backlash at congress

BY QUENTIN PEEL IN JOHANNESBURG

Only days before the first anniversary of his election as South African Prime Minister, Mr. P. W. Botha is this week facing a crucial test of his authority within the ruling National Party.

The coming week is likely to decide whether he can head off a growing right-wing backlash within the party against the cautiously reformist approach of his administration.

Tonight Mr. Botha opens the Transvaal Provincial Congress, representing not only the largest wing of the party, with almost half its MPs, but also its conservative heart.

He faces an audience both worried and confused by the talk of policy changes given by Mr. Botha and his senior Ministers, and bitter about the loss of electoral support in recent by-elections, both to the left and, more significantly, to the right.

Key issue: at the congress will be the proposed changes in labour laws, to allow more rights and mobility for black workers, changes in sports policy, allowing racially-mixed games between schools, and possible consolidation of the homelands, absorbing more white farmland.

The reformist tone of Mr. Botha's administration, even though its actions have been extremely cautious, has encouraged a conservative backlash. The extreme right-wing Herstigte Nasionale party has picked up significant support in recent by-elections, with several more to come. Dr. Connie Mulder, the disgraced former minister of information, and leader of the national party in the Transvaal, is actively canvassing for the creation of a new conservative alliance.

So far, Mr. Botha has stubbornly stuck to his new terminology. He has spoken of the threat of revolution if there is no internal accommodation, but declined to spell out the details

of his new direction. He has yet to win any significant support from the left of the party for his vague promises, but he has lost ground to the right.

Nevertheless, although the new direction is being pushed by a minority of the ruling party—its intelligentsia, newspapers, and business supporters—Mr. Botha is still in a strong position.

African unity remains a basic tenet of the National Party, with a memory of power lost through deep divisions in the past. His arch rival, Dr. Andries Treurnicht, Dr. Mulder's successor as Transvaal leader, is still unsure of his position, and apparently willing to bide his time.

Mr. Botha, as Defence Minister, also represents the military establishment, and will undoubtedly emphasise the international pressures on South Africa as a means of reunifying his party.

One of the Prime Minister's key allies, Mr. Pik Botha, the Foreign Minister, emphasised the defence question again at the weekend. In response to a Zambian accusation of cross-border raids by South African troops.

"The violence on the borders can come to an immediate end the moment these states refuse sanctuary to the terrorists," he said.

South Africa had complained to the UN about 90 alleged violations of the Namibian border by guerrillas operating from Angola.

The growing violence in Namibia (South West Africa) was underlined on Saturday night by a big bomb blast at a petrol station in the black township outside the capital, Windhoek. No casualties were reported, but extensive damage was caused in what was the fourth explosion in Windhoek in the past year.



Mr. P. W. Botha

# Grain stocks at four-year low

WASHINGTON — World grain stocks will fall to the lowest level in four years by June 30 next year, according to a Government report released yesterday.

The U.S. Agriculture Department report predicted that world grain stocks would drop to 189m metric tons on that date, well below the 227m tons of the end of June this year.

"The world grain outlook has tended towards slightly smaller supplies. With continued strong demand worldwide, stocks are forecast to decrease slightly more than indicated in August," the report said.

It adds that world grain production in the 1979-80 crop season would fall to 1.38bn tons from the record of 1.44bn tons produced in the preceding year.

While grain output would increase this year in the U.S., crops in the Soviet Union and India have been badly damaged by adverse weather.

The Department predicted that world grain trade would set a record, exceeding 200m tons in the 1979-80 season, because of strong overseas demand.

World wheat production was now expected to total about 400m tons, down slightly from the last estimate, but still the second largest crop on record. It said.

World coarse grain production would total 729m tons this season, off from last year as a result of smaller crops in the Soviet Union, western Europe, Canada and Australia, the Department said.

# PLO hopes rise for Spanish recognition

BY DAVID GARDNER IN MADRID

MR. YASSIR ARAFAT, chairman of the Palestine Liberation Organisation (PLO) left Madrid visibly satisfied with the results of his official visit.

In the short term Spain is likely to raise the PLO delegation here to full diplomatic status. Much significance was attached during the visit to a flag-raising ceremony at the PLO offices, and to Mr. Arafat's being permitted to fly the Palestinian flag on the official car loaned him by Sr. Adolfo Suarez, the Spanish Prime Minister.

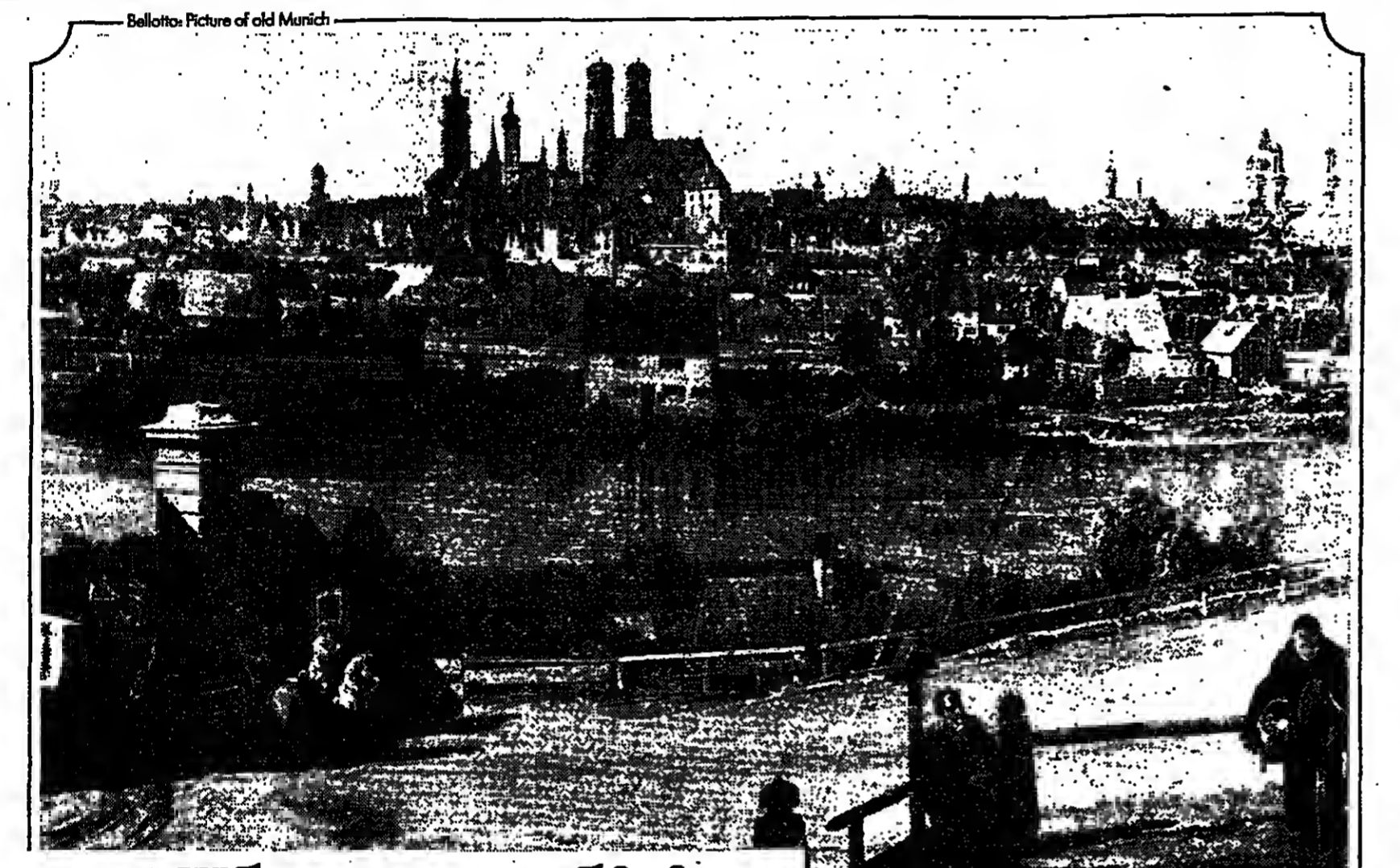
Both sides stressed the special relationship between Spain and the Arab world, while Mr. Arafat said that Spain was a key bridge in the dialogue opening between Europe and the Arabs.

The Spaniards are satisfied that the initiative has immeasurably strengthened their negotiating hand with Arab countries and that this will pay off in both diplomatic and economic terms.

Reuter adds from Rabat: Mr. Arafat was reported to be undertaking a mission of mediation in the Western Saharan conflict during his visit to Morocco. On arrival, Mr. Arafat said only that his visit was part of consultations with Arab States about the present situation in the Arab world.



Yassir Arafat



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# Ireland wins management cup

THE EUROPEAN Management Cup was narrowly won in Paris this weekend by the national champions of Ireland, a team of six accountants and planners from Irish Cement. Michael Dixon writes. The winners finished the two-day, computer-based contest with a profit of £5.4m—only £51,000 ahead of the Swedish national team.

France, the previous European champions, were knocked out in the semi-final by Neil Tomkin, the UK title-holder, who played single-handed. In the final, Mr. Tomkin, profit improvements manager of Bank Xerox, could manage only fourth place behind the Danish national side. The contest was the seventh European management championship in the series which developed from the national competitions originated in 1970 by the Financial Times.

# Australian poll

ADELAIDE — A powerful swing by South Australian voters to the Liberal Party looked like ending 10 years of Labor Government in the state yesterday. The snap election was called by the Labor Premier Mr. Des Corcoran who took over as Premier last February, succeeding Mr. Don Dunstan, who resigned because of ill health. Reuter.

# Rupee rate

NEW DELHI — India yesterday raised the value of the rupee by 1.4 per cent against the pound. The new rate, set by the Reserve Bank of India is 17.75 rupees to the pound against the former rate of 18 set on July 18 when the rupee was devalued by 1.39 per cent. Reuter.

# CONTRACTS AND TENDERS

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KINGSTON, JAMAICA

138 KV EXPANSION PROGRAMME  
SECOND POWER PROJECT  
IBRD—LOAN N. 1516—JM

The Jamaica Public Service Co Ltd (JPS) has received a loan from the World Bank in various currencies, equivalent to twenty (20) million U.S. dollars and intends to apply the proceeds of the loan towards the purchase of materials and services for expansion of its transmission and distribution system.

JPS announces that international bids will be received for the supply of materials and equipment and erection works for the following transmission lines and substations:

(a) Substations—Contract No. WB-141  
Bogue—138/69/24 kV—40 MVA  
Bellevue—138/69 kV—40 MVA  
Duncans—138/69/24 kV (extension)  
Tredegar—138/69 kV (extension)

(b) Transmission Lines—Contract No. WB-151  
Duncans/Bogue—42 km  
Tredegar/Bellevue 40 km  
Oracabessa/Annotto Bay—22 km

Bids are invited from Suppliers/Erectors located in the member countries of the World Bank and Switzerland. Bidders may tender on one or more material supply schedules or erection works or combination of both in the above contracts.

Bidding documents will be available for purchase beginning September 5, 1979 upon payment of a non-refundable sum of U.S. dollars 200.00 or equivalent currency for each set of documents required. Intending bidders are required to contact:

The Manager — Purchasing/Stores  
Jamaica Public Service Company Ltd  
6, Knutsford Boulevard  
P.O. Box 54  
Kingston, Jamaica  
Phone: 926-3190  
Telex: 2180 JAMSERV

or  
E.L.C. Electroconsult  
Consulting Engineers  
Via Chiaiera, 8  
20151 Milano, Italia  
Phone: 306582  
Telex: 331103 MILELC

The tender closing date is November 15, 1979 and bids are to be submitted to the Manager-Purchasing/Stores Jamaica Public Service Company Limited at the above address.

امكاننا ان نعمل

WORLD TRADE NEWS

Across the board import curbs urged for Britain

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

IMPORT CONTROLS should be non-selective and achieved either by imposing a uniform tariff or by auctioning such foreign exchange as can be afforded for imports, according to Mr. Wynne Godley, a leading Cambridge economist.

He maintains a total opposition to ad hoc protectionism in the form of quotas or tariffs imposed selectively to protect companies and industries that are failing, particularly if such a policy is adopted in the context of general stagnation and in isolation from a coherent macro economic strategy to achieve full employment.

country can afford. If the adverse trends in UK trade continue without remedial intervention, the only way of doing this will be progressively to defate the economy.

BP bid to build £100m N. Zealand gas plant

By Sue Cameron, Chemicals Correspondent

BRITISH PETROLEUM is understood to be one of three companies competing for the chance to build a £100m methanol plant in New Zealand, using gas from the offshore Maui field as a feedstock.

The announcement ended the Shell groups hopes of building a liquid natural gas (LNG) plant based on Maui reserves in the near future.

Brazil sets ambitious export target

BY DIANA SMITH IN BRASILIA

THE BRAZILIAN Government has proclaimed an ambitious export target for 1984 - \$40bn (£15bn) worth of goods and services, 266 per cent more than this year's forecast exports of \$15bn.

Undeniably, Brazil's export drive has worked in recent years. Overseas sales doubled between 1974 and 1978, from \$6bn to just over \$12bn, with manufactured goods, that year, accounting for over half of exports, whereas earlier in the decade their impact was minimal.

However, Jewish Government tax incentives to manufactured exports and punitive tariffs on imports gave Brazil's foreign trade a controversial reputation, and the proliferation of bureaucratic bodies and red tape often frustrated exporters.

Having inherited the commitment of the Geisel Government to GATT, implying phasing out export incentives and import restrictions, the new Figueiredo Administration has now set about streamlining foreign trade. This week it revived the defunct Foreign Trade Council (Concex).

This time round, Concex will not be a rigid Government body. Although it is presided over by the Finance Minister, Sr. Carlos Rischbieter, with the Ministers of Foreign Affairs, Industry, Agriculture, Energy and Transport sitting on the board, the private business community (at Sr. Rischbieter's instigation), will be represented in the person of Sr. Paulo Vallinbo (director of Springer Admiral) and three leading businessmen as board members.

trade policies and tactics, especially operations in the complex world of commodities and engineering in the developing nations, Concex will have a go at the 1,470 separate pieces of legislation that, bog down exporters and drag them over a route that travels through 13 separate Ministries and 50 civil service bodies.

At the outset, Sr. Rischbieter announced simplification of export manifests, and simpler procedures for exports of spare parts, as well as a new scheme for insuring export credit.

Current economic facts provide ample justification for the Government's resolve to streamline foreign trade: between them the \$7bn Brazil must spend this year on crude oil imports and \$9bn on servicing the \$50bn foreign debt, will

exceed estimated 1979 exports by between \$1-2bn.

With its renewed intent to continue rapid development by greatly diversifying industry, Brazil cannot soon decrease essential capital goods and raw materials imports, constantly made more expensive by mini devaluations of the cruzeiro.

Thus, apart from selective discouragement of superfluous imports (Sr. Rischbieter wants to end current "blanket" restrictions) the Government has little choice but to face an annually rising import bill.

Therefore, achieving reasonable trade balances or surpluses through greatly increased exports is seen as the means of easing some pressures on the current account of the balance of payments—now \$8bn in the red.

SHIPPING REPORT

Shorter-haul inquiries increase

BY LYNTON McLAIN

THERE WAS a marked acceleration of interest in the oil tanker and bulkcarrier trades last week, although 12m deadweight tons of supertankers still awaited cargoes in the Gulf.

There was an increase in the number of inquiries for tankers for use on shorter-haul trades routes. The Mediterranean, West Africa and the Caribbean loading areas all had active trading. A 130,000-ton tanker from the eastern Mediterranean to Italy gained Worldwide 125.

For tonnage loading out of West Africa, Worldwide 165/170 was the going rate for discharge in the Mediterranean and the UK/continent zone.

However, in the Gulf brokers forecast that considerable demand would be needed to absorb the excess tonnage. An average of 1m tons of oil cargo will have to be available each day for shipping until the end of September to provide sufficient work for the tonnage now laid up.

very large crude carriers in the Gulf remained stable compared with the previous week. VLCCs gained Worldwide 574 for discharge in the west and for eastern destinations smaller VLCCs gained Worldwide 65 rates. An 80,000-ton vessel was chartered at Worldwide 115.

In most markets, there was an upsurge in the number of charterers seeking period char-

ters, although only a small number reported long-term agreements last week.

On the bulk carrier markets, reports from the U.S. suggest that Russian grain purchases for next year may be about 30m tons. In the raw materials trade, fewer ore and coal vessels were chartered, although the general level of inquiry remained stable.

World Economic Indicators

Table with columns: RETAIL PRICES, % change over previous year, Index base year. Rows include UK, W. Germany, U.S., France, Holland, Italy, Belgium, Japan with data for various months from 1977 to 1979.

THE IMF ANNUAL REPORT

Call for 'gradual' but not 'too gradual' approach

WHAT FOLLOWS is the "key issues of policy" section of the first chapter of the International Monetary Fund's annual report, dealing with developments in the world economy.

AT THE end of 1978, worries were being felt in many quarters about the international energy picture over the longer term and about fundamental aspects of economic performance, including high inflation, sluggish economic growth, under-utilisation of resources, periodic instability of foreign exchange markets, the difficult situation of the non-oil developing countries, and the spread of protectionist trade measures.

To these factors has been added the steep run-up in oil prices during 1979. The current environment of great uncertainty clearly forebodes a period of severe strains in the world economy, emphasising the need for policies to deal with them.

Of key importance in this regard will be the character of domestic economic policies pursued in the industrial countries. The present array of problems confronting national authorities in the industrial world includes simple prescriptions offering promise of early success, but rather points to the need for the pursuit of a many-sided strategy of policy in a medium-term framework.

The basic approach must be a "gradual" one, but not "too gradual". It calls for determined and skilful use of the traditional monetary and fiscal instruments, combined with the application of suitable incomes policies (EMG) to prevent oil price increases and other external cost pressures from entering into the indexation, formal or de facto, of wages and other incomes) and increased emphasis on measures to effect structural adjustments and improve supply capabilities, including adaptation to the lower availability and price of energy.

Obviously a strategy of policy along these lines will be difficult to implement—it will require courage and perseverance so as to elicit public support for national economic policies and, above all, to reduce inflationary expectations.

The international setting in which industrial countries will be conducting their domestic economic policies is in the process of changing substantially. At the beginning of 1979 the growth of total output in these countries, after proceeding at a pace of 4 per cent in each of the two previous years, was expected to decline moderately because of an economic slowdown in the United States, a U.S. authorities and welcomed internationalisation in view of the need to curb domestic inflationary pressures. Now, it seems clear that the decline in output growth will prove to be much sharper than had been generally expected.

of 1978 may be expected to have a generally depressive effect on economic growth, both directly through their deflationary impact and indirectly through their intensification of the inflationary process. Second the course of real Gross National Product in the United States during the first half of 1979 has turned out to be quite weak.

Such a situation raises a number of important policy issues. In the first place a U.S. recession (whatever its duration or severity) could not be "offset" in the other industrial countries. In general, their economies are not buoyant and, because of either the fact or the threat of inflation, they would not be in a position to adopt significantly more expansionary policies in the endeavour to compensate for a recessionary development in the United States, although they could reasonably be expected to maintain their growth rates as much as possible.

As for the United States itself, a "cooling-off" period of very low growth of output or of declining output would serve to dampen inflationary pressures, but it would not permit any lowering of the priority that has been accorded by the U.S. authorities to the reduction of inflation in a medium-term context.

Indeed, policies to counter recession would need to be very cautious. On the external side a flattening out or decline in U.S. economic activity would have a positive impact on the current account balance through an easing of the demand for imports. However, the impact on the overall U.S. balance of payments and on the effective exchange rate of the dollar would depend also on the extent in which changes in relative monetary conditions affected capital account positions.

A more general point of significance is that exchange rates for the major currencies would be subject to different influences in a setting of weaker demand conditions, coupled with higher oil prices and continuing inflation. Whether the relative calm that has characterised the exchange markets in recent months would be extended would depend to a large extent on policies. The larger industrialised countries, while keeping their policies attuned to fundamental objectives, might well find it necessary to co-ordinate their actions regarding exchange market intervention—and, at least to some extent, their monetary policies.

To assist developing countries with their external financing, industrial countries in a strong position on current account should take all feasible steps to improve their position as capital exporters. An important area of such improvement must be to ensure a larger stabilising flow of private capital—something that inevitably takes time to achieve but that can be influenced by additional government measures to encourage capital outflows, both directly and through changes in institutional arrangements and prac-

tices in the private sector. In addition, and here immediate action could be taken, there is a strong case for all industrial countries—surplus and deficit alike—to increase their official development assistance.

Considerable scope for improvement of economic conditions round the world lies in a better working of the international adjustment process. The wide differences that characterise the current positions in member countries call for adjustment policies on a broad scale, carefully differentiated on an individual country basis.

As a general proposition, each country should contribute to world economic growth in relation to the strength of its external position and to its price performance. The implications of such an approach—if carried out effectively—are that countries in a relatively strong external position would act to support growth to the extent that it would not jeopardise their anti-inflation programmes, while countries in a relatively weak external position and with high inflation would adopt corrective measures of a fundamental nature to deal with their problems.

In this context, the industrial countries could make a particularly important contribution by co-ordinating their growth objectives and policies over the medium-term. Such a process could serve to bolster economic growth, to safeguard the recent improvement in the distribution of current account balances and thus to promote the maintenance of orderly exchange markets and of reasonable stability in the exchange rates of major countries.

The very difficult conditions now confronting the authorities of most member countries also portray a large, and probably difficult task for the International Monetary Fund. The role of the Fund is a very broad one, ranging from the conduct of a world-wide forum on economic and financial problems to the provision of financial, consultative and technical services to individual countries.

In the exercise of all its functions, such as those involving the principles of conditionality or of surveillance over exchange rate policies, the Fund must act fairly and even-handedly.

It seems evident that under the conditions that loom ahead, the Fund must be prepared to assist many of its member countries in dealing with their economic and financial problems but, notwithstanding the high priority that has to be given to adjustment, it would appear that claims on the Fund's resources in the next few years could be large.

The Fund has endeavoured to adapt its policies and facilities to the needs of member countries in the changing circumstances of recent years and it is continuing to assess the adequacy of improvements that have been or are being introduced.

Czech industries faced with technology gap

BY LESLIE COLTIT IN BERLIN

CZECHOSLOVAK economists say there will have to be a "major reorganisation" especially in the engineering industry after the criticism by Mr. Strougal and the Czechoslovak party newspaper Rude Pravo.

The newspaper recently issued a sweeping condemnation of industrial management, noting that in any wide-ranging changes the work of the manager, the general manager or the Minister "should not be overlooked."

The basic problem, the economists say, is that the large series of Czechoslovak plant and machinery exports to the Soviet Union means factories are unwilling and unable to adapt to the individual demands of customers in the West.

The reluctance to adopt new technology in the end also depresses the price level of Czechoslovak goods exported to the Soviet Union and other

countries. The Czechoslovaks say there will be no economic changes along the lines of the successful Hungarian socialist market economy. The Soviet Union would not approve of such reforms only 11 years after the Communist leadership of Mr. Alexander Dubek was ended by the Soviet occupation of the country.

Instead, the economists officials say there is likely to be a move toward greater industrial concentration into units of the type known as kombinats in East Germany, which have greater responsibility for foreign trade.

In the first six months of this year, Czechoslovak industry had production losses of 4.5bn crowns (\$450m) which were partly attributed to severe winter weather.

The growth in industrial production was 1.6 points lower than planned. Most seriously,

exports to the Soviet Union, to pay for oil and gas, have been running behind schedule.

The Soviet Prime Minister, Alexei Kosygin, during a visit to Prague earlier this year, criticised Czechoslovakia's inadequate planning for the economic co-operation between Moscow and Prague during the five year plan period starting in 1981.

Exports to the Soviet Union, to pay for oil and gas, have been running behind schedule.

The Soviet Prime Minister, Alexei Kosygin, during a visit to Prague earlier this year, criticised Czechoslovakia's inadequate planning for the economic co-operation between Moscow and Prague during the five year plan period starting in 1981.

Turkey deficit narrows

ANKARA — Turkey's foreign trade deficit narrowed to \$126m in July from \$150m a year ago, the Commerce Ministry announced.

In July imports registered \$272m, down by 44 per cent from June and by 8 per cent from a year ago. Exports were \$146m down by 14 per cent from June and up by 2 per cent from a year ago. AP-DJ

"That Lufthansa is punctual on long flights didn't surprise me, that Lufthansa is so punctual on short flights did."

This is an authentic passenger statement.



# Satellite threat alarms television companies

BY ARTHUR SANDLES

THE PROSPECT of satellite television transmitters beaming down commercial TV programmes to much of western Europe in competition with established national systems is beginning to alarm broadcasting bodies. A space-based Television Luxembourg is seen as a likely reality rather than science fiction.

vision Society in Cambridge. Sir Charles Curran, former director general of the BBC and now managing director of Visnews, a television news agency, said "the prospect of signals from Luxembourg reaching substantial areas of the South East of England is already causing perturbation in commercial television circles in Britain."

mitters in the sky could be in use "within the decade." "Direct broadcasting controlled by, let us say, Luxembourg or Monaco or Liechtenstein or Andorra or San Marino, will inevitably cover substantially greater areas than the national sovereign territories of those states."

services of these stations "will be dependent financially, and this cannot be denied, on the achievement of major audiences over large areas of the contiguous countries. Theoretically, the overall will be unavoidable. It will, therefore, be legitimate."

control which has been used, at its best, to safeguard standards of broadcasting over a significant part of Europe. Will now be open to direct competition from organisations whose purpose will be to make large profits."

# Big clashes on air licensing expected

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

ONE of the biggest air-route licensing battles yet seen in the UK starts on October 24, when the Civil Aviation Authority starts public hearings of claims by several independent airlines for new routes from Gatwick to the Continent.

Corfu, Rhodes, Herakleion, Dublin, Paris, Nice, Brussels, Amsterdam, Stockholm, Naples, Munich and Berlin.

Aviation Authority has made up its own mind what to do, there must be an extensive series of negotiations with the foreign countries in each case to get their permission for reallocation of routes.

TESCO is today launching the first shots of the autumn offensive in the grocery price war. It is reviving the use of special coupon schemes whereby shoppers can exchange a coupon allowing up to 10p of a specified product.

in line with the growth of their popularity in the retail trade. A recent survey carried out by the Nielson market research company shows that three-quarters of consumers use coupons. In 1978, a record 270m coupons worth £16.7m were redeemed, compared with 192m coupons worth £11m in 1977.

## More Home News on Page 20

enable flights to start in the spring. This will also depend on foreign Governments' reactions to the independent plans.

Under the bilateral air agreements between the UK and European countries in nearly every case only two airlines are allowed on the routes, British Airways and the appropriate foreign-flag airline.

By using Air Kent they can be in Brussels much more quickly. At Brussels passengers can connect with Sabena flights to many long-distance destinations.

## Metrication rap for food industry

CRITICISMS of the food and drink industry for not making the switch to metrication more understandable for shoppers will be contained in a Price Commission report to be published tomorrow.

## Prestel hit by lack of equipment

DELAYS in producing equipment to link telephone subscribers to Prestel, the Post Office's information service, have angered companies who provide information for the service.

# Opposition to proposed docklands authority

BY JOHN LLOYD

LABOUR politicians in London's Docklands yesterday said establishment of an urban development organisation for the area would lead to delay, and discourage investment.

O'Grady, leader of Southwark Council and vice-chairman of the Docklands Joint Committee, said: "The proposed UDC would sacrifice the partnership between the six local authorities which is now showing results on the ground."

# Better maths 'would cut unemployment'

IMPROVEMENTS in the way mathematics is taught in British schools would lead to a drop in the numbers of school leavers who fail to find jobs and help to ease the shortage of skilled labour, says a report.

# Whitehall intervention in labour market criticised

GOVERNMENT intervention in the labour market promotes inefficiency, inflation and unemployment according to a new collection of essays published this morning by the Institute of Economic Affairs, an independent body which sponsors research into market solutions to economic problems.

# SNP swing to hard lines

THE SCOTTISH National Party, following its reversals in the general election and the devolution referendum, reached a watershed at the weekend with adoption of a clear change of strategy.

# Sinclair Radionics shuffle

FINANCIAL TIMES REPORTER

A MAJOR reorganisation has taken place at Sinclair Radionics, the National Enterprise Board-backed electronics company, after the resignation of Mr. Clive Sinclair, its former chairman and managing director.

tronic a completely independent company from the parent, but still controlled by the NEB. The 100 workers will continue to produce electronic instruments such as oscilloscopes, multimeters and frequency counters.

# ITV card fans

DURING the dispute most regular ITV viewers have switched to BBC. Only 5 per cent have switched off or stayed tuned to the apology card, say BBC researchers. BBC 2 had its biggest audience ever last month—1.8m for a rerun of the film, The Good, The Bad and The Ugly.

# Lambeth revolt

LAMBETH, south London council will today tell the Government it will not cut services in line with Department of the Environment guidelines. A protest march to Westminster is planned for November 7.

This advertisement appears as a matter of record only.

SEPTEMBER, 1979

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# New Year start for tachograph

By Lynton McLean

THE GOVERNMENT has decided that tachograph vehicle and driver performance recorders will be fitted to the first category of lorries—those over 3.5 tonnes gross weight—from New Year's Eve.

# Top union officials in bid to solve Vauxhall pay row

BY PHILIP BASSETT, LABOUR STAFF

NATIONAL union officials will meet Vauxhall Motors' representatives today in try and solve a dispute over pay. The dispute has stopped work at the company's Ellesmere Port plant for two weeks, and has disrupted production at its other two factories.

The condition threatened to withdraw the guaranteed shift payment if flexible working was not agreed in the event of an unofficial stoppage by one section. It was seen as especially contentious, particularly by the more militant Ellesmere Port plant on Merseyside.

It will be the first direct involvement of national officials in the dispute. A pay dispute at the company last year ended soon after it went to national level, but local shop stewards yesterday were not confident about the outcome of today's talks.

Some union officials were sceptical yesterday that today's meeting in London with national officials of the Amalgamated Union of Engineering Workers, the Transport and General Workers' Union, and the Electrical and Plumbing Trades Union, could do much that would affect the action at Ellesmere Port.

# Shopping coupon drive by Tesco

BY DAVID CHURCHILL, CONSUMER AFFAIRS CORRESPONDENT

TESCO is today launching the first shots of the autumn offensive in the grocery price war. It is reviving the use of special coupon schemes whereby shoppers can exchange a coupon allowing up to 10p of a specified product.

# Ministry of Defence studies anger unions

BY OUR LABOUR STAFF

CIVIL SERVICE unions have instructed members in the Ministry of Defence not to co-operate with a series of studies by the Department into its manpower costs. Union officials say these could lead to having a key defence work to the private sector.

transferring forces' supplies, instructed control and contract cleaning to private industry. They are in areas where industrial action was taken on pay earlier this year.

# Prestel hit by lack of equipment

By Elaine Williams

DELAYS in producing equipment to link telephone subscribers to Prestel, the Post Office's information service, have angered companies who provide information for the service.

# APEX executive prepares for talks on merger

BY NICK GARNETT, LABOUR STAFF

EXECUTIVE MEMBERS of the Association of Professional, Executive, Clerical and Computer Staff begin discussions in earnest next month with some of the six unions which have tentatively offered proposals on a merger with the 150,000-strong white collar union.

Some APEX officials have concluded that merger negotiations with the Association of Scientific, Technical and Managerial Staffs, one of the six unions courting APEX, are likely to prove more successful than any other. ASTMS has so far been cautious about the possible outcome of those talks.

# Quicker rail run on Glasgow line

BRITISH RAIL plans to bring its 155 mph Advanced Passenger Train into service between London and Glasgow within a few months. The train will cut the journey by 45 minutes.

# ICI staff accepts 18%

MANAGERIAL and professional staff at Imperial Chemical Industries have agreed a pay settlement worth 18 per cent in a deal which completes the company's pay negotiations in the current round with all its groups of workers.

by ballot an 18 per cent offer plus an unspecified productivity bonus. The union's ICI national standing committee agreed over the weekend to accept the deal after further negotiations with the company, when it was agreed that the question of differentials should be referred through the group's agreed procedure to mediation.


# Registration of engineers backed by profession

BY HAZEL DUFFY, INDUSTRIAL CORRESPONDENT

A SIGNIFICANT proportion of people in engineering and scientific jobs favour the introduction of registration of engineers along the same lines as the medical profession so as to make engineering a more attractive occupation.

tion between specialist professional engineering and technical work, and 61 per cent were in favour of registration. Questioned more closely as to whether registration would be a good thing for the respondent's own post, 68 per cent said it would from their own point of view, 56 per cent thought it would be a good thing for their employer and 64 per cent thought it was a good thing in the national interest.

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هكزا سن الة دل



# Building and Civil Engineering

## £11m Norwest Holst contracts

CONTRACTS totalling over £11m have been won by three divisions of Norwest Holst.

Refurbishment of Lily Mill 'B'aw, Oldham, Greater Manchester, for the Littlewoods Organisation is the largest of several awards to Norwest Holst Northern. The £1.6m contract includes provision of modern mail order receiving, storage and despatch facilities, new catering facilities, lifts and electrical and heating installations. External works include a 2,000 square metre ramped paved area and reinforced concrete retaining walls.

English Industrial Estates Corporation has awarded this division two contracts one for the construction of 15 advance factory units and associated works on a reclaimed inner city

site at Sandon Way Industrial Estate, Bootle and another worth about £900,000 for ten advance factory units in three blocks.

Other work for this division from the City of Liverpool for five terraced factory units at Taylor Street, Liverpool, and a £350,000 award for the construction of a 52 bedroom extension and associated external works at the Excelsior Hotel at Manchester Airport for Trust House Forte Hotels.

Norwest Holst Southern has won two contracts. One worth £1.5m is from European Ferries for the construction of a new storey office block at 4-10 Heneage Lane, London, EC3, and the other, worth £1m, is from the City of Birmingham for construction of an engineer-

ing block at Handsworth Technical College, Birmingham.

The Civil Engineering division of the company has been awarded two contracts. Largest of these is worth £1.9m and is for the construction of berthing, at H.M. Naval Base, Portland, Dorset. The contract with associated services, includes steel piling, reinforced concrete work, earthworks and roadworks. The other award is worth £722,000 and is for the construction of plant, on the Stanlow North site, Ellesmere Port for Shell Chemicals UK.

Finally, Norwest Construction, has been awarded a £225,000 contract by the British Eastern Region of the British Gas Corporation for mains and service laying in the Guildford, Surrey, area.

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## £13m Portuguese motorway

TRANSPORT system work by the Sir Alfred McAlpine Group through its associated Portuguese company will bring in over £13.5m under contracts recently won.

Constructores A. Supico S.A.R.L. in a joint venture with Tecnopol LDA, has won a contract from Brisa-Auto Estradas de Portugal worth around £13m. The first company is the McAlpine associate.

With McAlpine operating as the nominated supervisory contractor this large contract calls for the construction of a section of the Auto Estrada do Norte, between Condeixa and Coimbra in Portugal. This will be 15 kilometres of dual two-lane motorway together with 15 bridges and two interchanges.

Agent for the contract is Eog F. Neves and the work is scheduled for completion in three years.

Supico has also won a contract from Brisa for the construction of an interchange and two bridges at Avieras de Cima in Portugal.

At home, in the Midlands, the northern wing of the company is to build a workshop and laboratory for Freeman Chemicals at a site on Deeside.

This £2m task is due for completion in 17 months. Architect is Ormrod and Partners.

## Cairo bank project

SEIFERT INTERNATIONAL has won a limited architectural competition for the new 36,135 square metres headquarters of the Banque MISR in Cairo.

The £2m project is to have a street-level banking hall set before its imposing 30-storey tower. Moolithic marble planes (said to have been inspired by classical Egyptian architecture) flank the buildings.

Tenders are to go out shortly and work is scheduled to begin on site early next year.

Wildnell and Trollope (Middle East) are quantity surveyors and Ove Arup International the structural engineers.

## £5½m contracts for Wimpey

OVER £5½m worth of contracts have been announced by the Wimpey Group and one for £2m will, it is claimed, create 300 jobs in a central Scotland clothing factory.

The company has started work within the last few days on an extension of a 3.4 acre site at the Camelon, Falkirk Factory of Bluebell Apparel (which makes denim leisure clothing under the "Wrangler" trade name) which includes production areas, plant room, offices, service road and car park. Project will add almost 103,000 square feet of floor space to the present factory and will take 15 months to complete.

Peterlee Development Corporation, Co. Durham, has placed a £1.8m contract for the erection of six factories in five separate blocks, together with access roads, car parks, footpaths, drainage and other services. The factories are in steel frame construction with external walls of brick and block at lower level and metal cladding at upper level. Roof structure is flat with metal decking and built-up felt covering and rooflights.

In Couva, Trinidad, George Wimpey (Caribbean) has won a contract worth over £1.4m for the construction of a shopping development. Awarded by the Anglican Church of Trinidad and Tobago, this contract comprises a complex with a total floor area of 75,200 square feet contained in one and two storey buildings which will consist of a department store, supermarket, shops, bank, snack bar and other amenities.

Grampian Regional Council in Scotland has placed a £460,000 order for the design, procurement, supply and installation of a Unox system at the Persley sewage treatment works near Aberdeen. Conversion will be achieved by covering the aeration tanks, replacing the surface aeration equipment and supplying oxygen from a 3.3 tonne a day oxygen generation plant also to be supplied and installed by the company.

## Testing the integrity of pipes

LEAKS IN oilfield tubing string joints as small as one cubic foot per cent can be quickly and easily detected by the Drexel SLT system, jointly developed by Drexel, the British-based international oilfield equipment group, and its associated company BOC-NOWSCO.

The system breaks new ground in that it simulates normal operating conditions by allowing a joint to be tested under internal pressure. It also relies on identification of traces of helium outside the joint and not upon measurement of a pressure drop. This technique is more reliable, more sensitive and quicker to use.

Prime component of the system is the Drexel SLT tool which is lowered inside the tubing. The joint to be tested is isolated by two packers at either end of the tool which are expanded by air pressure to form a seal.

Air dosed with helium is introduced from a small skid mounted compressor and the internal

pressure raised to any required level up to 5000 psi.

Leaks are measured by applying a probe from a highly-sensitive BOC-NOWSCO portable mass spectrometer to the external faces of the joint. Minute leakages of helium—as small as 1 cu ft/100 years—are immediately detected.

The SLT system has been designed to API standards and is suitable for use in pipe diameters up to 9½ in.

Drexel DPD, Waldron Road, Montrose, Angus DD10 8SW. 0674 4158.

## Shifting the earth

PROMISING TO save money in both the public and private sectors is the Cannon range of earth moving equipment which can enable a single operator to accomplish four separate earth moving jobs without changing attachment, or leaving the tractor seat, announces Welbourn Sportsgrounds, Welbourn, Lincoln (0400 72475).

The range has been developed in the U.S. where it has been in use for the past 25 years and, initially in the UK, three tools will be available in 29 models, covering a wide range of load capacities and cut widths with either part hydraulic operation or fully hydraulic.

The Earthcrafter has a rotating bucket which, at the pull of a lever will provide four earth-moving operations.

The unit's box type scraper is controlled from the seat through a conventional hydraulic link and is a basic three operation tool for scarifying, filling and levelling. Scarifiers are adjusted manually to give low or high cut or they can be removed altogether for fast backfilling and levelling.

## Offices in Swindon

COMMERCIAL UNION Properties (Developments) has contracted Sir Robert McAlpine and Sons to construct a five-storey office block at the junction of Gloucester Street and Station Road, Swindon, under a contract worth £2.4m.

The structure will be L-shaped and 22 metres high. It will be air conditioned and provide 5,300 square metres of floor space.

Work starts immediately with completion programmed for late next year.

## Lovell gets work in London

WORTH £5.5m, a contract to Y. J. Lovell is for 274 dwellings at Margrave Park, Islington, for the London Borough of Islington.

The accommodation will consist of a mixed development for two and four people comprising flats and houses and will include special housing for the disabled, particularly those dependent upon the use of wheelchairs.

There will also be accommodation provided in a sheltered housing block for old people, with warden accommodation included. Work on the site, which has already been cleared of buildings under a separate contract, will start on October 16 and is to take three years to completion.

Quantity surveyor for the contract is Oswald E. Parratt and Partners.

## Over £6m Costain awards

INCLUDED IN recently awarded contracts to the Costain Group is over £4m worth of civil engineering works at London's Heathrow and Gatwick airports.

Requirements under the £3m contract at Gatwick for British Airports Authority are for the demolition of buildings, breaking-up of pavements, excavation and filling, and the construction of aircraft pavements.

At Heathrow, the £1.1m contract comprises civil engineering works for roads, sewers and water mains and aircraft pavements, taxiways and runways. Also included is maintenance,

alteration and addition to buildings within the perimeter.

Glaxo has awarded contracts totalling £2.2m for a two-storey office and laboratory block and modification to its group research building at Park Road, Ware, Herts. Also included is an upper roof level plant room and external works and drainage.

Called for are reinforced concrete strip foundations, ground floor slab columns and beams, trough floors and roof with metal deck upper roof plant room and staircase housing.

## £3m Crown court

A PROPERTY Services Agency contract worth £3m has been awarded to Turiff Construction for the construction of a new Crown and county court at Blackhorse Street, Bolton.

The building is to have five storeys in reinforced concrete frame structure clad in sandstone.

Project, which is due to begin this month, is scheduled to take two years to complete.

## A roofed reservoir

JOHN TAYLOR AND SONS (Middle East), a member of the Association of Consulting Engineers, is to design and supervise construction of the Shuwaikh water distribution complex for the Kuwait Ministry of Electricity and Water.

Included will be a 280m gallon reservoir, a 90m gallooz day blending and chemical dosing facility and a pumping station. The reservoir will have a roof of about 45 acres and consideration will be given to what recreational or other uses the roof area could be used.

In addition, offices for some 150 water department staff are to be designed. The studies for the project are to start immediately. Design work should begin early in 1980, with construction scheduled to begin in 1981.

John Taylor and Sons is also currently engaged on the detailed design of the Kuwait effluent utilisation project which, when operational, will permit up to 86m gallons per day of purified sewage effluent to be utilised for irrigation.

## Advance factories

ENGLISH INDUSTRIAL Estates Corporation has announced the following advance factories contracts:

Tarmac Construction award £466,500 from Department of Industry for 23,000 square ft and another 10,000 square ft at Nol site, Consett, Co. Durham.

A. Lax and Sons award £163,000, from Development Commission at Tow Law, Co. Durham for a terrace unit type divisible into two units each of 2,500 square ft.

J. G. Green award £106,000, from Development Commission at Alnwick, Northumberland, for 5,000 square feet, also including site development works.

## IN BRIEF

● Prime site at Water Lane, Wilmsholme, Cheshire, is to be developed by Whitcroft as a new group headquarters providing 18,000 square ft of gross internal area and 14,000 square ft of net office space. Planning application has been approved and construction will start early next year.

● Supply of steel gantries for traffic signs on the Strilingshire link motorway due to open in November, is worth £185,000 to Robert Watson and Company (Constructional Engineers), Malm contractor is Tarmac National Construction.

## Mowlem at Milton Keynes

WORKSHOP UNITS for small businesses at Monks Way, Milton Keynes are to be built under a £1.2m contract awarded to John Mowlem by the Development Corporation.

The 28 buildings will be on a development called the Bradwell Abbey Workshop Scheme and will be either attached or separate and grouped around two concrete courtyards.

They will vary in size from 90 to 225 square metres, and construction will be of traditional cavity brickwork walls with roofs of coated asbestos sheeting on steel frames and beams.

Ancillary work includes installing site roads, two concrete courtyards, drainage and services.

Work has now started with completion due next spring.

## Laboratory job for Laing

A TWO-STOREY laboratory building for ICI Central Toxicology Laboratory at its Alderley Park complex, Macclesfield, Cheshire, is to be built under a £2.2m contract awarded to John Laing Construction.

Work on the project is to start immediately for completion in 18 months.

The building, with a 4,000 square metre floor area will house laboratory services at ground level and a plant room on the first floor.

Structure will be steel-framed on in situ concrete ground slab supported by pad foundations and a sheet steel roof. Cladding will be in profiled steel sheet with glazed northern elevation.

## Six authoritative information packages from the Building Research Establishment

The Building Research Establishment is the chief government agency with responsibility for research into construction and the speedy dissemination of its findings. Specialist units of the Establishment study end provide answers to practical problems faced by the industry as a result of changes and innovations in the field of building and construction.

Six important information packages have been produced by BRE. All are authoritative, up to date, well presented, end outstanding value for money. Some of these packages may be of great interest and service to you. Please use the form below to order the items of your choice.

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- 2. A critical look at working drawings**  
A study, based on BRE research of 2000 drawings by architects and engineers, of many features—helpful and otherwise—of current drawing practice. 40 slides, with presentation notes, are backed up with BRE reports on the coordination and use of working drawings. Price, £8.90
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Forty slides, with presentation notes, which illustrate how wind damage occurs and introduce methods now used for calculating wind loads. The package also contains eight reports on wind pressure measurements of the Post Office Tower and low-rise buildings; a boundary layer wind tunnel; and wind damage in the UK. Price, £8.90
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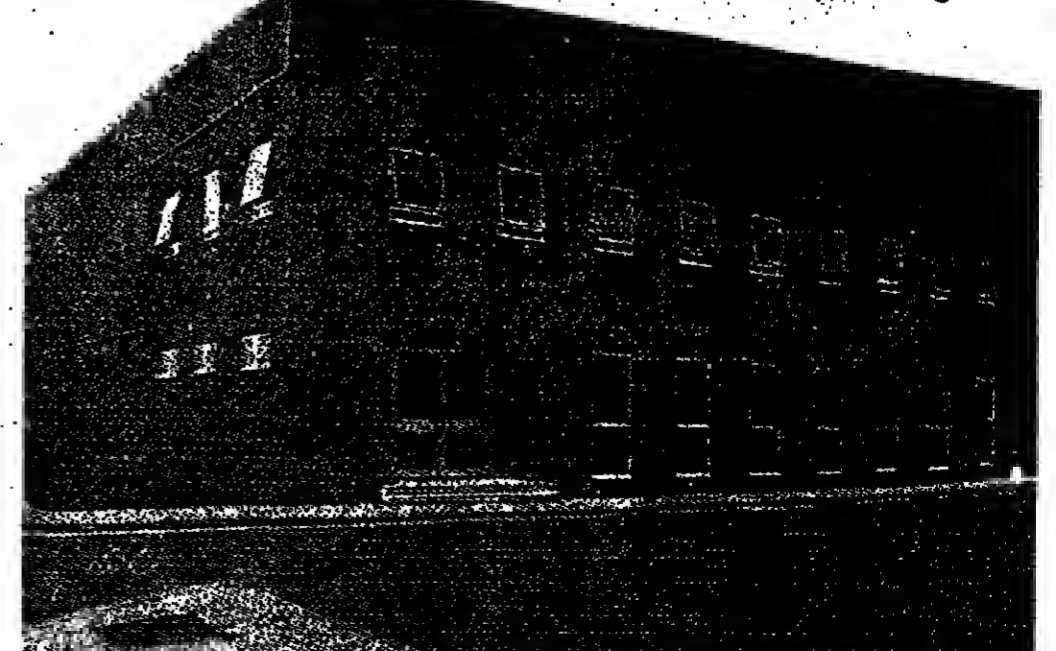
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# FINANCIAL TIMES SURVEY

Monday, September 17 1979.

## Murchison Field Platform

### Oil may flow next summer

By Kevin Done  
Energy Correspondent

WHEN THE first oil begins to flow from the Murchison Field in the North Sea next year—production is expected to start during the summer of 1980—it could well mark the historic moment that the UK for the first time is able to produce as much crude oil as it consumes.

The development of North Sea oil has been a long and costly business since the first commercial field in the British sector, Montrose, was discovered in September, 1969. But in June this year North Sea oil output exceeded 1.7m barrels a day for the first time, equal to more than three-quarters of UK needs, and, according to the latest Government forecasts, self-sufficiency should be reached in the second half of next year. The Department of Energy said recently that UK crude oil production is expected to total 85m-105m tonnes next year, compared with consumption this year of 96m tonnes.

The Murchison Field, which is being developed by an Anglo-Norwegian group of 12 oil companies, is likely to be the sixteenth oil field to come on stream in the British sector of the North Sea. It is located to the east of the Shetland Islands among the stretch of prolific fields that includes the two largest North Sea finds, the Statfjord and Brent Fields. However, Murchison was dis-

covered rather later than most of the neighbouring fields—in September, 1975—and its significance lies not so much in its size, but in the way its developers have applied in practice the lessons learned from the hard experience of developing some of the earlier UK finds.

By the time Conoco, the U.S. oil company and operator of the Murchison Field, began detailed planning for the project in 1976, it had already become obvious that the first generation of North Sea oil fields had run into serious problems as costs increased wildly beyond the original budgets and construction timetables began to run many months behind schedule.

One of the first decisions taken by Conoco management, therefore, was to compile a study of earlier North Sea projects to try to learn what had gone wrong. The result was a report that quickly became known within the company as "The Book of Errors," although it went by the rather more formal title "Application of prior North Sea experience to Murchison project planning."

The study showed that many of the early projects had been set in motion before detailed design work had been completed. The result was that major pieces of equipment were being constructed and designed at the same time.

### Changes

As the designs were modified, so the costs increased in a way that was almost impossible to control. The Murchison group took this point very much to heart and tried to have all designs completed before going out to contract.

It set up a design review board which investigated any proposed major design change both in terms of the extra costs and the delays to the construction schedule. According to Mr. Dennis Gregg, Conoco's general manager of the Murchison project, if contracts are let

When a 25,000 tonne steel platform jacket was floated out to the Murchison Field in the North Sea recently, it marked the most important stage so far in the Anglo-Norwegian development of the medium-sized field. Crude oil production could begin there by next summer, making Murchison the sixteenth oil field to come on stream in the UK sector of the North Sea.

### UK AND NORWEGIAN OIL FIELDS IN THE E. SHETLAND BASIN OF THE NORTH SEA

Field	Operator	Block	Total recoverable reserves (m bbls)	Production to end 1978 (m bbls)	Estimated remaining recoverable reserves (m bbls)	Quality deg. API	Sulphur content percentage	Percentage recovery factor
BRENT	Shell	211/29, 3/4	2,215	39	2,176	38	0.2	45-50
CORMORANT (SOUTH)	Shell	211/28	110	—	110	35-36	0.55	45
CORMORANT (NORTH)	Shell	211/28	400	—	400	35	0.3	40
DUNLIN	Shell	211/23, 211/24	400	5	395	35	0.4	30-35
HEATHER	Unocal	2/5	150	1	149	35	0.57	40
MAGNUS	BP	211/12, 211/7	450	—	450	39	0.28	45-50
MURCHISON	Conoco	211/19	318	—	318	38	0.26	40
NINIAN	Chevron	3/3, 3/8	1,200	Neg.	1,200	35.1	0.41	37
STATFJORD	Conoco	211/24	233	—	233	38	0.2	50
THISTLE	BNOC	211/18, 211/19	500†	20	480	37.4	0.31	50

\* Includes 530m barrels of NGLs and condensate. † Includes 50m barrels of NGLs and condensate. Source: Wood, Mackenzie.

on the basis of conceptual drawings alone "you can only pay as you go along. It is difficult to work on fixed sum contracts and you can have no idea of the final costs before you start."

Earlier field developments also showed that serious errors were made in underestimating the weight of individual pieces of equipment to be installed on the offshore platform. So Conoco instituted a system of careful weight control. It also chose a radically new overall management approach. A large team of more than 80 Conoco staff was set up to be the core of the project management, instead of the normal practice of contracting this job outside to engineering consultants. This team then worked in parallel with the consulting engineers who were hired on the basis of offering "project services."

Control of the work could then remain firmly in the client's hands. The result has not been perfect. Inevitably there have been some delays and the 25,000 tonnes steel platform jacket was floated out to the North Sea only three weeks ago, about 3½ months behind schedule. Most of the equipment to be installed on the platform is completed, but two of the individual equipment modules that are being constructed at one of the UK fabrication yards are still to be finished.

The original budget costed the whole Murchison project at \$750m. Mr. Gregg claims that development is still within this budget, although the final cost is more likely to be in the region of \$850m because of sharp changes in the dollar/sterling exchange rate. (The project was first costed when the pound was worth only \$1.60.)

The main delay in the construction of the steel jacket was caused by an eight-week strike last year at J. Ray McDermott's fabrication yard at Ardara on the east coast of Scotland about 10 miles to the east of Inverness. Work was also hampered when a tall crane, specially constructed to lift the steel frames into position, collapsed at the site in September.

Murchison is a medium-sized field by North Sea standards with recoverable reserves estimated at about 300m barrels of crude oil. In addition, associated natural gas reserves in the field could total 152bn cubic feet and Conoco hopes to recover about 20m barrels of the heavier gases propane and butane.

The field's design capacity could allow production of up to 150,000 barrels a day of crude oil—similar to the nearby Dunlin Field and slightly less than the neighbouring Thistle Field—but peak annual output is likely to average about 130,000 barrels a day. This level of pro-

duction could be held for about four years, starting in 1981, before the field begins to decline.

In order to achieve a high initial level of production Conoco has installed three wellheads on the sea bottom—two for oil production and one for water injection—which will be brought on stream at the same time as the first two or three wells to be drilled directly from the platform.

These sub-sea wellheads were installed last year on the original exploration wells drilled nearly three years earlier to discover the field. Murchison has a relatively simple and compact geological structure and the decision to go ahead and develop the field was made after only three wells had been drilled on the field.

The sub-sea wells should considerably enhance the early cash-flow from the field and they have also provided the

opportunity for testing new methods of sub-sea installation. These three satellite wells will be linked up to the main platform during the spring next year. The connecting pipelines could have been laid earlier, but they might easily have been damaged during the installation of the steel jacket or during the early months of offshore construction.

Crude oil production from Murchison will flow by pipeline to the 51bn oil terminal that is now under construction at Sullom Voe in the Shetland Islands. The terminal will not be completed until the early 1980s, when all the gas processing facilities are brought on stream. But Sullom Voe has been accepting crude oil, which has been stabilised offshore instead of at the terminal, since autumn last year. Oil is flowing ashore through two major trunklines, the Brent System pipeline and the Ninian pipeline.

The Murchison Field will be linked to the seabed pipeline network by a 10-mile line running to the Dunlin Field, which will be laid early next year. Here the crude will be mixed with oil produced from both the Dunlin and Thistle Fields as it flows into the 20-mile shared pipeline, in which the Murchison group has a 27.3 per cent interest, leading to the Cormorant Field.

The Cormorant platform acts as the main pump station for the Brent System pipeline and will be the vital junction controlling a major part of the UK's crude oil production. It will also take oil from fields such as Brent, Hutton and North-west Hutton, transporting it along the 95-mile trunkline to Sullom Voe. The Murchison group has a 12.28 per cent interest in the main pipeline.

The problem of disposing of the associated natural gas production from Murchison has not been solved quite so easily. The Government is anxious to ensure that only the minimum gas necessary is flared into the atmosphere and wasted at the offshore oil fields. The gas represents a valuable energy asset in its own right, but most of the North Sea oil fields do not produce sufficient gas individually to justify the building of an independent gas pipeline ashore. Tentative discussions were started among the operators of the four most northerly North Sea fields, Murchison, Thistle, Dunlin and Magnus, about the construction of the so-called "northern leg" gas pipeline which would have collected gas from the four fields and linked them into the main Brent gas trunkline running to St. Fergus in Aberdeenshire. This mini gas-gathering system probably would have been built by the British Gas Corporation and the British National Oil Corporation and initial negotiations were started last year. The whole scheme has been put back into the melting pot, however, by the Government's decision to revive plans for a much more comprehensive gas-gathering pipeline. This line might run from the northerly fields such as Magnus and Murchison all the way to the central North Sea to pick up gas from several other fields such as Brae and Beryl, before coming ashore at St. Fergus. The economics of this scheme would be greatly enhanced if it could also pick up gas from the Anglo-Norwegian Statfjord Field, but the Government appears to believe that enough gas could exist already in the UK sector of the North Sea to justify a new pipeline with or without the Statfjord gas.

Mobil, operator of the Beryl Field, and the British Gas Corporation have launched a detailed feasibility study into the project, but if the line is built it is unlikely to be ready to carry gas before 1985-86. The Murchison group intend to reinject the associated gas into the reservoir for the first two to three years to help maintain production pressures, but by

CONTINUED ON PAGE 11

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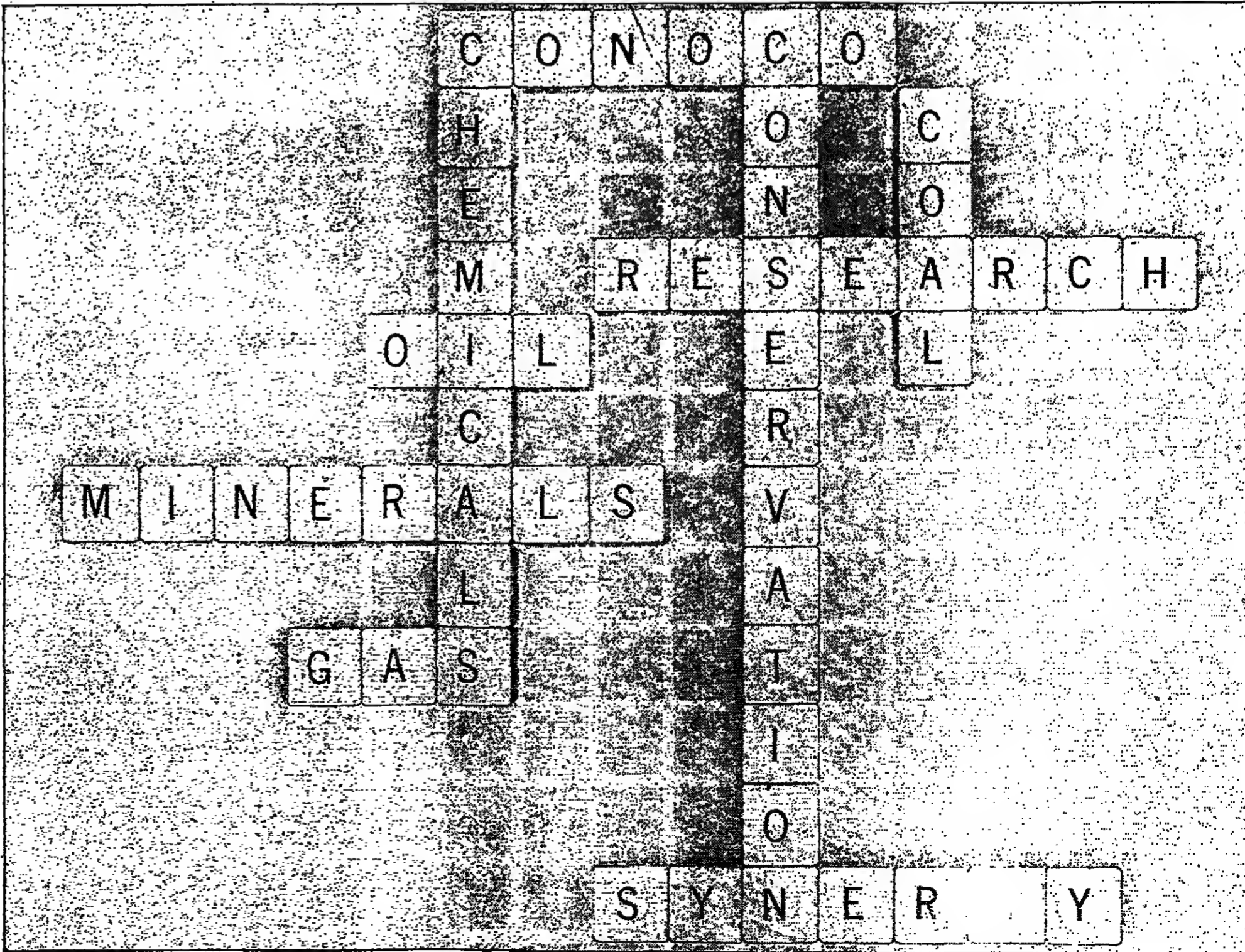
And of course our researchers are constantly employing techniques gleaned from all our areas of activity in a range of important projects.

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# MURCHISON FIELD PLATFORM II

## Project reaches key stage

THE INSTALLATION in recent days of the 25,000 tonnes steel platform jacket for the Murchison Field has marked the most important stage so far in the development of one of the North Sea's most northerly fields. The jacket is the largest structure yet to have been launched from the back of a barge into the North Sea. When the deck and all the processing units have been installed it will stand 866 feet above the seabed, rather taller than the Post Office tower in London which measures only 650 feet.

Much of the technology used for the construction of the Murchison jacket has been well tried and tested in many earlier platforms built for North Sea oil and gas fields. Indeed, the techniques used for building such steel jackets are a direct development of methods first used in the rather quieter waters of the Gulf of Mexico.

However, the Murchison platform is of necessity a much larger structure than many of its predecessors. It has been built to stand in 115 feet of water in the middle of the North Sea and has been designed to withstand the 150-knot winds and 100-foot waves that can occur in these stormy waters.

The field is located 120 miles to the north-east of the Shetland Islands and straddles the median line which divides the British and Norwegian sectors of the North Sea.

The jacket was towed out to the field about 91 months behind schedule, but this delay could be made up before next summer—when the field is due to start production—if the offshore work of installing and hooking together the various equipment modules proceeds smoothly. Once the jacket has been anchored firmly in place in the next few weeks by steel piles driven into the seabed, the next

task will be to lift into place the 3,000 tonnes steel deck, which has been constructed in Holland.

This frame will support the 14 other equipment modules, such as processing units, accommodation quarters, drilling rig, power stations and helicopter pad, which should be installed by the late autumn. Conoco estimates that it will need at least 50 clear days to install all the different items of equipment that are necessary to complete the platform. The hooking up and commissioning of the various units will last throughout the coming winter and next spring.

The steel jacket was designed by CJB-Earl and Wright, the Anglo-American partnership, which was established especially to tender for offshore work in the North Sea. It has done similar work on steel platforms for fields such as Thistle, Ninian and Montrose and is seeking further work from the Conoco group for the development of the Hutton Field.

### Delay

Construction of the Murchison jacket at J. Ray McDermott's yard at Ardesier, about 10 miles to the east of Inverness, fell behind schedule last year when work was halted by an eight-week strike.

Progress was further hampered when a massive crane, specially built for lifting the frames of the Murchison jacket into place, collapsed at the site. The accident seriously threatened the construction timetable, but in the event McDermott was able to build alternative cranes, which were installed in time to handle the major lifts.

Altogether 35,000 tonnes of steel for the platform were made and rolled by the British

Steel Corporation at two of its Scottish plants, out a further 8,000 tonnes of steel was shipped in from Japso. More than 70 per cent of the contracts for construction and services on the Murchison Field have been awarded to British companies, but as the orders for Conoco are completed several of the companies, in particular some of the fabrication yards, are facing an uncertain future.

The workforce at McDermott's own yard at Ardesier was cut by 500 in May because of uncertainty over future orders and the other major platform yards are also facing the threat of large-scale redundancies. This year McDermott has floated out two large steel jackets. The first structure was built for Petrobras, the Brazilian state oil company, for installation on the Namorado field.

The 52m jacket was towed out in the middle of the winter but was moved only as far as the southern North Sea off the English coast near Hartlepool, where it sank in a storm.

At the nearby platform yard of Highland Fabricators at Nigg Bay on the Cromarty Firth nearly three-quarters of the 1,600 workers face redundancy by early September. Both Highland Fabricators and McDermott have been hit hard by their failure to win the last two North Sea platform orders to be placed for the North Cormorant and Maureen fields.

To recent weeks the Nigg Bay yard has been completing work on small orders for equipment for Amoco, Chevron and Texaco and is facing the winter with only the contract for the main steel jacket for Shell/Essso's Fulmar Field remaining.

This should guarantee some work until next spring, but both the yards near Inverness, McDermott and Hitab are bid-

ding hard for new work. McDermott will continue work through to next summer completing a cellar deck for the Beatrice Field and piles for the Fulmar Field.

Both yards are setting great hopes on securing the next important order to be placed for the UK sector of the North Sea, the steel jacket for British Petroleum's northerly Magnus Field. That contract should be awarded in the late autumn and it could be followed next year by orders for several other fields, which are now coming near to development decisions.

### Plans

The group of companies led by Marston, which is intending to develop the Brae Field in the central North Sea, is seeking permission this summer from the Department of Energy to go ahead with the project, and the Mobil group is planning a second platform for the Beryl Field. Both these structures are expected to be conventional steel jackets.

The Amoco group will be going out to tender in a few months' time for a steel structure for the North West Hutton Field. The recent order for the North Cormorant platform was awarded to a partnership of the Scottish yard at Methil, Fife, run by Redpath de Groot Canadian and the French company Union Industrielle et d'Entreprise, based at Cherbourg. Even this order was not sufficient to stave off redundancies at Methil, however, and RGC announced in July that about 300 of its 800-strong workforce would be losing their jobs by the autumn.

According to Dr. J. Dickson Mabon, the former Energy Minister who is now chairman of RGC, even if new work is won

before the redundancy notices expire, it will make no difference. "Our objectives are to break even by next March and to get down to a workforce by early in October which we can keep stable and in full employment."

These three established steel fabrication yards were not helped earlier this year when Phillips Petroleum decided to award the contract for the jacket for its Maureen Field to an entirely new partnership consisting of Chicago Bridge and Iron and the Glasgow-based Weir Group.

The main jacket will be built at a yard at Hunterston on the Lower Clyde, which was built with £7m of Government money and which has lain empty and unused for five years. But the contract will create about 450 jobs for two years in an area of high unemployment. At the same time more jobs will be created at Loch Kishorn, where the Anglo-French-Dutch partnership of Howarth-Doris-NAPI is to build the Maureen deck.

In the longer-term, many North Sea oil companies will be looking increasingly in sub-sea production systems to replace costly fixed platforms. At the Murchison Field Conoco has taken the opportunity to experiment with some new sub-sea technology using the three existing satellite wells that were originally drilled to discover and appraise the field.

The system of three sub-sea wellheads will allow production to begin at a higher rate when the pipeline and production facilities on the platform are complete. Two of the satellite wells will produce oil and the third will be used for water injection to maintain pressure from the beginning of production.

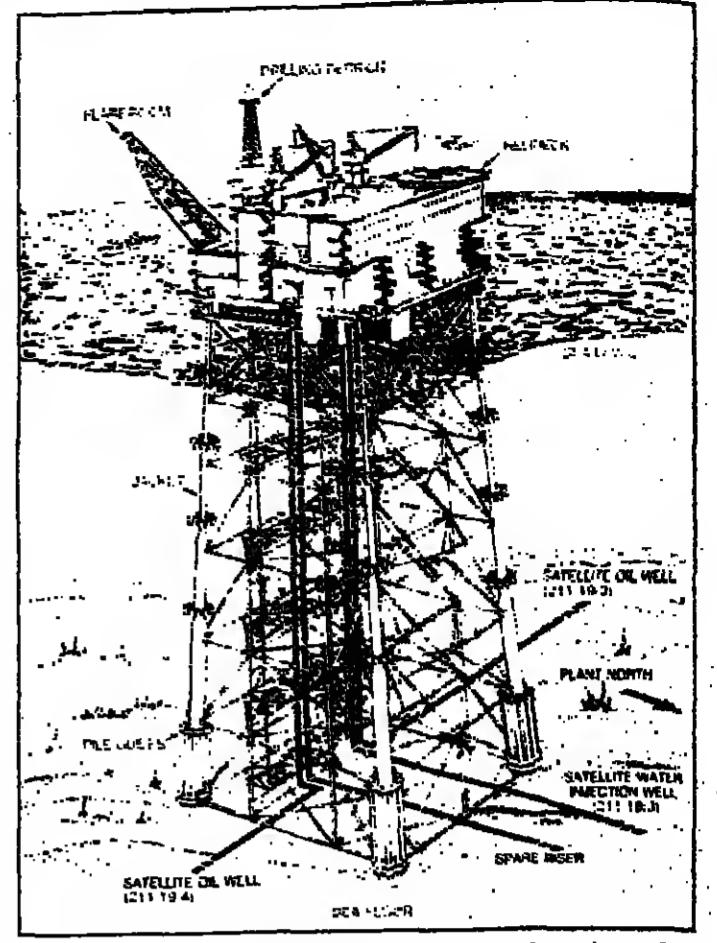
Water injection will be used

from the very beginning and should help to ensure recovery of at least 45 per cent of the oil in place. When the field is in full production about 150,000 barrels of water a day will be injected into the Murchison reservoir to assist recovery rather more than the average of 130,000 barrels a day of crude oil that will be produced.

The small diameter pipelines, which will link the sub-sea wells to the platform, will be installed next spring. An original approach has been devised for transporting them to the field. The lines are being constructed on land and will be towed out in complete sections, the longest measuring nearly 14 miles.

The pipelines will be towed on the 300-mile journey six to 10 feet off the sea bottom, supported at either end by sleds, which themselves are attached to tug boats on the surface. To avoid other pipelines or even old wrecks are encountered the trailing tug will hold back, increasing tension in the tow lines and causing the pipeline to "fly over" the obstacles with a clearance of about 90 feet.

Kevin Dowe



Murchison Field production platform showing risers for satellite subsea wellheads.

## Tests show area's high potential

ON JULY 11, 1975, a Conoco-led offshore exploration group began drilling a "wildcat" well on North Sea block 211/19, just over a mile from the UK/Norwegian median line. Seismic surveys had already indicated that the underlying rock structure was similar to formations which contained several oil fields already discovered in the area.

By the beginning of September the assessment of the seismic data had been proved correct. The well had discovered a light, high quality oil in about 385 ft of productive layer of sandstone. Two drill stem tests flowed the low-sulphur crude oil at rates of 1,350 and 5,600 barrels a day. It was the encouragement that Conoco needed.

Almost immediately the group began drilling again. The second well was sunk to the north of discovery hole and encountered similar geological conditions. By January 17, 1976, yet another well had been drilled, this time somewhat closer to the median line. Again it was a success—indeed, the results from the logging and coring tests were so similar to those of the previous two wells that Conoco did not bother to run a flow test.

A further well was sunk in block 33/9 in the Norwegian sector of the North Sea to test the eastern extension of reservoir, but by then the exploration group had a very good idea of the field's layout. Murchison—named after Sir Roderick Murchison, the 19th century Scottish geologist—had emerged as one of the richest fields in the North Sea.

### Location

Almost square in shape, and some 3,900 acres in extent, Murchison is flanked by faults on three sides (south-east, south-west and north-east) and the oil-water contact to the north-west. The oil is trapped some 9,900 feet below the seabed on a tilted fault block—a sloping layer of sandstone about 400 feet thick. The formation, known as the Brent Sands, dates back to the Middle Jurassic period around 150m years ago.

The Jurassic has been proved as the most oil prolific of all the reservoir rocks in the North Sea. It contains about 20 named UK oilfields, among them some of the biggest on the Continental Shelf—Brent, Statfjord, Thistle, Ninian, Piper, Clismore and Magnus.

These northerly fields are located mainly in the geological trend known as the Viking Graben—essentially a complex subsided rift running roughly along the line of the UK/Norwegian median line. This rift possesses a number of complicated fault-block features containing oil at depths of between 9,000 and 12,000 ft.

Most of the exploration activity in the Viking Graben took place between 1970 and 1977 when no less than 227 wildcat and appraisal wells were

sunk. Of these, 89 were unsuccessful and 43 discovered oil or condensate (very light oil). Mr. Dick Fowle, exploration director of British National Oil Corporation, told an offshore conference in London last year that the success ratio of this drilling activity, particularly in the 1970-75 period, was extremely high; far higher than the worldwide average and the average for the UK Continental Shelf as a whole. For instance, between 1970 and 1976, oil companies discovered oil in one out of every three wells sunk there.

Clearly exploration and development work in this part of the North Sea has reached a comparatively mature stage, particularly on the major tilted fault blocks. According to Mr. Fowle, the few remaining unexplored blocks are relatively small—but obviously have high potential for successful discoveries.

Companies will have to accept that future fields will be much harder to find than Murchison. They may be hidden in traps associated with complex faulting or erosion; traps difficult to identify without drilling. (A case in point is the Brae Field, much further south. No less than 13 wells have been drilled on the Brae structure which is thought to be a series of linked stratigraphic traps.)

In addition, it is quite possible that oil found in such traps at levels below 12,000 ft will—because of the nature of the rock—flow far less freely than the oil encountered in the northerly fields now under development.

Oil analysts at stockbrokers Wood, Mackenzie have shown that companies with interests in these northerly fields can, in the main, expect to recover between 40 and 50 per cent of all the oil trapped in the reservoir rock.

Murchison's recovery factor, for instance, is put at about 40 per cent, while those with interests in Thistle, Statfjord and, perhaps, Magnus and Brent can expect to recover half of the available oil.

It may come as a shock to a lay reader that over half of the available oil will be left in the ground, even after a field's development, but this is one of the sad facts of oil industry life. It is impossible to recover all of the oil in a reservoir. Some of the crude may be isolated from production wells by faults and other geological blocks. Even in a produced zone a substantial fraction will be left, trapped as tiny droplets of oil in minute rock pores. That said, the recovery factor for Murchison and other northerly fields should be judged against the worldwide average of nearer 30 per cent of the original oil in place.

Looking at the East Shetland Basin as a whole there are some 10 commercial oil fields either on stream, or under development. The amount of oil remaining to be recovered from them is almost 6bn barrels—enough in itself to keep Britain fully supplied with oil for well over eight years.

But it will not stop there; for there are a number of other development projects in train in the area. And again Conoco and its Murchison partners (Gulf and BNOOC) could play an important part.

The trio are among an eight-member consortium expected to use a revolutionary platform design for the exploitation of the Hutton Field which lies between the Cormorant and Brent discoveries. A decision to apply for Government development approval is expected shortly. The platform system being considered by Conoco, as the field's operator, would not be a steel structure as in Murchison's case, but a floating structure tethered securely to the seabed.

### Valuable

Such a system is considered to be particularly applicable to deep water fields. It seems, therefore, that Hutton might be used as a test bed for the design. Hutton does not lie in particularly deep waters compared with some North Sea reservoirs—82 feet to be exact. Murchison, by comparison, lies under 12 feet of water. However, the platform's performance there will provide valuable information to Conoco and the industry at large.

Hutton has estimated recoverable reserves of about 250m barrels. The development system could cost between £500m and £700m.

Located alongside Hutton is the North West Hutton Field which the Amoco group wants to exploit through a conventional steel platform production system. This field (containing between 250m and 300m barrels of recoverable reserves) could cost about £500m to develop.

Further to the north-west, Shell/Essso's Tern Field in block 210/25 looks like being another candidate for development, albeit at a later date and probably after the drilling of further appraisal wells.

Like Hutton and North West Hutton, Tern lies very close to an oil-gathering line in the Brent pipeline system. There is a very good chance, then, that these fields will help to maintain the level of throughput at a time when production from some of the fields developed earlier begins to decline.

This, then, is one of the major advantages of a prolific oil-producing region like the East Shetland basin. Fields can be developed using common transportation systems. Their exploitation can, to some degree, be timed so that maximum benefit can be gained from these costly shared facilities.

And there are encouraging indications that there are more fields still to be discovered in the area. They will probably be smaller than Brent—or Murchison for that matter—but they will be a valuable addition to Britain's reserves nonetheless.

Ray Dafter  
Energy Editor

## Tight controls aid progress

THE \$700m platform for the Murchison oil field is a work of very many hands. Its living accommodation and production systems are the result of a highly complex and closely co-ordinated building programme in the UK, Holland, France and Norway.

Fabricators from these countries won the contracts two years ago to supply the 14 modules, the helicopter deck and the gas flare boom which will occupy about 1.5 acres at the top of the North Sea's most northerly, and second tallest, production platform.

Most of these different components are complete and are

to be transported to the Norwegian coast, from where they will be towed to licensed block number 211/19 in the East Shetland Basin where production is scheduled to begin next summer. When erected on the 25,000-ton jacket, they will bring the total weight of the entire platform to 50,000 tons—and its height to 866 feet—a third higher than the Post Office tower in London.

However, the progress so far in this international construction project is a tribute to the tight management control by Conoco, which for the first time will operate a North Sea oil field, as opposed to merely

being a participant. Conoco went to the length of reorganising itself and formed a special project team of selected staff, directed by Mr. Tom Marr.

This appears to have been a very shrewd move, adding muscle and weight to its determination to achieve progress on as broad a front as possible. Bechtel International acted as projects services contractor, but Conoco people made the major decisions with work following as close as possible to the plans.

The reasoning behind this tight control was to avoid the expensive delays experienced on other North Sea fields caused partly by letting builders design the platforms as they went along.

The design of all the "top side" facilities was entrusted to Matthew Hall Engineering, which has been involved in seven other North Sea platforms. It designed the drilling facilities, oil and gas production, water treatment and injection, living quarters, utilities, safety systems and module design, leaving the finer details to Bechtel, whose supervisors worked alongside Conoco's own men in the various fabricators' yards.

A major feature of Matthew Hall's approach was the building of design models, believed to be the first time such a method has been used in constructing an offshore platform. It is now following a similar system for the platform of British Petroleum's Magnus Field.

It was in late 1976 that Matthew Hall was appointed to plan the superstructure of the Murchison platform, comprising 16 prefabricated modules, for a production of 184,000 barrels a day, based on test production wells and 17 for sea water re-

### MURCHISON PLATFORM—THE MODULE MAKERS

RDL North Sea, Teesside  
Two accommodation modules and helicopter deck.

William Press Production Systems, Tyneside  
Two production processing modules;  
Compression module and gas sales module.

Ponticelli, Bordeaux  
Two wellbay modules.

Whessoe, Teesside  
Drilling power and mud modules and drilling substructure.

De Groot, Rotterdam  
Two utilities modules.

Whessoe, Teesside  
Switchgear and heat recovery unit.

A/S Nymo Mek Verksted, Grimstad  
Flareboom.

injection into the oil field. The living quarters were to house 198 personnel in a "warm and cheerful atmosphere," which could be self-sufficient for three weeks, working 24 hours a day, for 35 or 30 years. The brightly-coloured fabrics and furnishings were to dispel any feelings of claustrophobia.

The result has lived up to this brief. The Murchison accommodation quarters are possibly the best available on the North Sea. Descending by lift from the helicopter deck, the new arrival finds himself in a bright carpeted reception area worthy of a deluxe motel. After work, he can write a letter in the lounge, read in the library, play on the full-size billiards table, watch a film in the tiered cinema with its 100 seats, or wash his clothes in the laundrette.

The aura of comfort is increased by Conoco's requirement that the two three-storey

modules should be built of stretched steel skin rather than bung on heavy frames. On the interior, stainless steel surfaces have been avoided, in contrast to the "fish shop" appearance of quarters on other offshore platforms.

Mr. Tommy Tecker, Matthew Hall's Murchison project manager, who visited the finished accommodation modules at Redpath Engineering's Lintburne Dingsdale yard on the Tees in June, later said that they were among the best "if not the best so far."

The yard itself was praised by Mr. Dennis Gregg, Conoco's vice-president and general manager of the Murchison project, who said the work of Redpath, a subsidiary of Redpath, Dorman Long, was "a credit not only to Teesside, but to the UK as a whole." Whenever components had failed to arrive on time, the yard's personnel had shown themselves to be "good scramblers," he said.

### Contracts

RDL, which also built the helicopter deck, is one of three UK fabricators which won contracts for Murchison modules. The other two were Whessoe, RDL's neighbour on the Tees, and William Press Production Systems, on Tyneside, which won two packages each.

The European fabricators were Ponticelli, in Bordeaux, De Groot, Rotterdam, and A/S Nymo Mek, Verksted, Norway.

By and large, they appear to have vindicated those who awarded the contracts. Only William Press has failed to complete some of its work, suggesting that it may have been unwise to give it more than one package of modules to construct. William Press, however, has blamed delays on extensive design changes made in the course of construction.

Yet all the contracts were won against keen competition in a market strongly favourable to the customer. Initially, 34 contractors were approached out of more than 80 in the UK, Western Europe and Scandinavia. The quotations were then judged on the basis of 200 variable factors, and awards were made on a weighted points basis. Since this produced a list of more than 30 viable fabri-

CONTINUED ON NEXT PAGE

## Congratulations to Conoco

Rig Design Services are proud to have been associated with the design and fabrication of the drilling facilities for the Murchison project.

**RDS**  
Rig Design Services Limited

4 Great Portland St., London W1N 5AA. Tel: 01-637 8544 Telex: 27383



## Bechtel extends congratulations to Conoco on tow-out of the Murchison jacket structure

In 1980 more of the energy treasures of the North Sea will be available to the United Kingdom when the jointly owned Conoco, BNOOC and Gulf Murchison Field comes onstream. Bechtel congratulates Conoco for the timely completion of the Murchison jacket structure and extends best wishes for continued success on the Murchison Field development.

Bechtel Great Britain Limited is proud to have a role as the Project Services Contractor assisting Conoco in the development of the Murchison Field. This represents the fourth offshore field development project Bechtel has identified with in the United Kingdom sector of the North Sea since 1972.

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# MURCHISON FIELD PLATFORM III

## Boundary problems

## Oil production CONTINUED FROM PAGE 1

WHEN Mother Nature distributed oil and gas fields around the world she had little regard for national boundaries. This is becoming apparent in the North Sea where some of the most attractive fields — Stafford, Frigg and Murchison — straddle the UK/Norwegian median line.

This gives rise to a number of problems. For a start, the Governments of each country are anxious to make sure that their own natural portions of cross-frontier fields are exploited to their maximum potential. This is important in terms of each country's tax-take and oil supply security.

Secondly, it gives rise to problems between the two groups of partners on each side of the boundary. In Murchison's case, these groups involve three on the UK side, and nine in Norway, although Conoco has a stake in each.

Thirdly, there is the problem of transportation. Will the oil and/or gas be landed in Britain or Norway? Usually, the pragmatic solution would be dictated by the consortium with the bigger share of the field. And this is the case with Murchison.

with a stake in the Norwegian sectors should be responsible for the distribution of all of Stafford's crude. Such an arrangement would have been an extension of crude oil swap deals which are commonplace within the oil industry.

Although the concept is simple, it would need some complicated refinements; the groups would have to agree on ways of balancing unequal quantities of oil which, in themselves, are of a slightly different quality.

For instance, the Murchison crude has a gravity of 37 degrees API whereas the Stafford oil is a little lighter, between 37.9 degrees and 41 degrees API.

The swap idea has been shelved, at least for the time being, and the Murchison and Stafford distribution systems are being developed separately. Murchison's oil will be transported ashore via the Brent Pipeline System, jointly owned by the participants in the Brent, Dunlin, Thistle, Cormorant and Murchison fields.

First, the Murchison crude will be taken by a 16-inch diameter pipeline to the Dunlin Field, some 10 miles away. This line will be wholly owned by the Murchison participants.

From Dunlin the oil will be carried in a 22-inch long, 24-inch diameter pipeline to the Cormorant Field. This particular stretch of the Brent system will be shared by interests in the Dunlin, Thistle and Murchison projects. Finally, the crude will be transported through the main 36-inch Brent trunkline, from Cormorant to Sullom Voe in the Shetland Islands, some 86 miles further on.

containing gas and natural gas liquids. The terminal can fuel the moment, accept only "dead" crude that has been processed offshore.

The gas needs to be separated from the oil to yield products that can be safely transported. By a process of heating and de-pressurising, the gases will be separated from the oil at Sullom Voe and then compressed, dried and broken down into their individual fractions to yield methane, ethane, propane, butane and some heavier hydrocarbons compounds.

Plans

The methane and ethane will be used as a mixture to fuel the terminal's own power station while the propane and butane gases will be refrigerated and stored before shipment to the chemical and energy industries.

Present plans indicate that some of the Ninian crude will be the first to be processed in this way, towards the end of the summer of 1980. All being well, the full facilities should be in operation by the winter of 1980-81.

This timescale means that for a short initial period, at least, the Murchison partners will

have to re-inject into the field the valuable natural gas liquids. The dry gas produced with the oil will be used partly as a fuel on the platform and partly as an aid to crude oil production.

Two wells will be used for gas injection and 10 for water injection. The gas and water will have the function of "sweeping" the oil towards producing wells. Eventually the associated natural gas will probably be recovered and sent ashore, possibly via the Brent system.

At least the Murchison group will not be flaring and wasting vast quantities of natural gas. UK last year operators flared 100 million cubic feet of gas into the atmosphere an average of 440m cubic feet a day. At the moment, with considerable flaring from the Brent Field, the wasted output is nearer 600m to 700m cfd—some 14 per cent of Britain's needs. Apart from the flaring which normally occurs during the commissioning period, the Murchison partnership is not planning to dispose of its natural gas in this way.

Not that there is as much natural gas in Murchison as there is in some of the other nearby fields. For instance, the

gas/oil ratio of Murchison is an estimated 530 cubic feet per barrel of oil; in Brent the ratio is nearer 1,800-1,900 cubic feet/barrel.

Although the transportation plans of the Murchison partners are well advanced, one important problem remains to be resolved. It is not yet clear how the Norwegian partners will pay for their share of the pipeline transportation costs for they are not members of the Pipeline Operators' Management Committee (POMC) established by the UK groups with interests in the Brent system.

Two particular alternatives are receiving close attention: (a) the Norwegian partners could invest in the pipeline project (perhaps with the UK Murchison partners acting as trustees); or as a second best, (b) the UK partners could carry the Norwegian consortium's share of Murchison production through a tariff arrangement.

Whichever method is chosen—and even the trading option cannot be totally discounted—it is certain that the solution will be found and ratified in time for the start of Murchison oil production next year.

ledge becomes available from the development drilling.

Conoco is a member of both the British and Norwegian groups. On the UK side its partners are Gulf and the British National Oil Corporation, while on the Norwegian side it is part of a nine-company group consisting of Amerada Hess, Texas Eastern, Amoco, Exxon, Mobil, Saga, Shell and Statoil.

Conoco and Gulf were the first oil companies operating in the North Sea to reach a participation agreement with the UK Government covering the sale of part of their Murchison crude oil to BNOG. As a result they received one of the most favourable deals secured by any North Sea operators. BNOG will have an option to buy no more than 23.2 per cent of each company's gross oil production from Murchison, at market price, and the full option can be exercised only in the sixth year after commercial production begins.

The untried development has proceeded fairly smoothly, but harsh words were exchanged between the Norwegian and UK Governments earlier this year when it was realised that only a small part of the work, probably less than 5 per cent, has been undertaken in Norway. The main construction work of equipment has been done at five yards in the UK, Holland and France, and Britain has taken more than 70 per cent of the contracts for equipment and services.

The row blew up when the UK began to complain that it was missing out on orders for the other, much larger, Anglo-Norwegian field development, Statfjord. The dispute was defused, however, when it was shown that Conoco had placed all its contracts on the basis of open competitive bidding. At the time the Norwegian yards proved uncompetitive against the prices offered by most of their European rivals.

### Reserves

Murchison contains an estimated 350m to 400m barrels of recoverable reserves of which—according to the average estimates of the various companies involved—some 83.75 per cent are under British waters. The appointment will be re-determined several times during the life of the field, however, and it will not be until towards the end of the production cycle that the partners will be sure of the field's exact position.

As it is, the partnerships feel that a higher proportion of the reserves are to be found on the British side, than was thought shortly after the field's discovery in 1975. Then, it was considered that about 75 per cent of the reserves were British.

From Dunlin the oil will be carried in a 22-inch long, 24-inch diameter pipeline to the Cormorant Field. This particular stretch of the Brent system will be shared by interests in the Dunlin, Thistle and Murchison projects. Finally, the crude will be transported through the main 36-inch Brent trunkline, from Cormorant to Sullom Voe in the Shetland Islands, some 86 miles further on.

The Murchison partners have a 12.8 per cent stake in the Brent pipeline system, a proportion dictated by the level of Murchison's peak production. It is a stake which was originally earmarked for the Hutton Field partnership (seven of the eight Hutton partners have an interest in Murchison anyway). The Hutton consortium is expected to announce its own development plans shortly with details of oil possibly being fed into the Brent system via the North West Hutton Field.

IN APRIL, 12 oil companies met in London to sign a unitisation treaty on the Murchison field, which straddles the line dividing the Norwegian and UK sectors of the North Sea.

The point of a unitisation treaty is that it enables companies working on either side of the boundary line to undertake a joint development instead of running two separate operations right next to each other. Shares in the joint venture are divided between the Norwegian and UK partners on the basis of how much oil each group has on its side of the line.

Initially it is impossible to do more than estimate how much oil is available on either side of the line. As production gets underway and the picture becomes clearer it is therefore often necessary to renegotiate unitisation agreements.

During the last year this is what has been happening on the Stafffjord unitisation treaty—one of the first to be completed. The Stafffjord field was originally divided so as to give 89 per cent to the Norwegian partners and 11 per cent to the UK ones. A Stafffjord renegotiation committee has been meeting to consider the new basis for unitisation, but its task is not proving an easy one. The Murchison unitisation treaty gives the UK licensees group an 82.75 per cent share in the field, while the Norwegian partners have 16.25 per cent between them. There are three UK-based partners and nine Norwegian companies involved.

Not that there is as much natural gas in Murchison as there is in some of the other nearby fields. For instance, the

Sue Cameron

## Anglo-Norwegian partnership

Colocidentally, recent studies of the nearby Stafffjord Field seem to have confirmed a similar trend although in this case the major part of the reserves is in the Norwegian sector. Recent reports have suggested that the British partners in Stafffjord—Conoco, Gulf and British National Oil Corporation—could have as much as a 15.9 per cent share of Stafffjord instead of the presently designated 11.12 per cent share. If that increase is confirmed it could boost Britain's share of recoverable reserves by as much as 140m—such is the size of Stafffjord.

Stafffjord and Murchison not only are located very close to each other (they are in adjacent blocks in each of the UK and Norwegian sectors) but they also involve the same groups of companies. Consequently, the idea was raised within the field's consortia that a special trading arrangement should be set up for Stafffjord and Murchison oil.

In essence, it was suggested that those with interests in the UK sectors of the two fields should handle all of the Murchison oil (the reservoir being mainly in the British sector) while those companies

Facilities

The Brent system—like the major Ninian Field pipeline—feeds oil into what is fast becoming Western Europe's major oil terminal. The Sullom Voe project will cost over £1m on current planning although it is quite likely that further facilities will have to be provided as new discoveries are made to the north, west and east of the islands.

Sullom Voe is designed to present to handle 1.4m barrels a day of crude oil—the equivalent of about 70 per cent of Britain's domestic oil needs. Construction work is now about 60 per cent complete and current crude oil throughput is running at approximately 450,000 barrels a day.

A combination of construction delays, both offshore and at Sullom Voe, will mean that it will be towards the end of next summer at least before the terminal will be able to handle "live" crude, that is crude oil

on the Horton field, where development is expected to go ahead later this year or early next year, and it is also the operator on the Viking gas field.

The group's current and planned expenditure in the North Sea is £500m, and the Murchison field itself has proved to be one of Conoco's biggest investments in a single project anywhere. It has interests in the Stafffjord, Thistle and Dunlin oilfields and it carries out substantial exploration work in the North Sea. Last month (July) it made a gas discovery and in March this year it discovered oil on block Conoco also has a 130,000 barrels a day refinery on Humberside which is ideally sited to take North Sea crude. The refinery, built in 1969, was in fact designed to take low sulphur, heavy crude—a similar crude to that of the North Sea—but a large part of its throughput now comes from the North Sea fields. Part of the production from Murchison will be refined at Humberside.

The group reckons that production from Murchison should start in the second half of next year as scheduled. There have been hold ups in the planned programme for Murchison—mainly caused by the collapse of a plant crane at the Ardersier yard in Scotland and by a strike there—but Conoco is still confident that the field will start production on time.

tion, and this has made BNOG a major crude trader—it has no refineries of its own. Aside from this it also ranks as one of the major North Sea operators, although not on the same scale as British Petroleum, Shell and Esso.

It is the operator on the Thistle field and the Beatrice field as well as on over 30 North blocks and in addition to this it has equity interests in Dunlin, Ninian and Statfjord. Altogether the corporation has an interest in some 1bn barrels of recoverable reserves, including all its finds.

The Norwegian group of companies with an interest in Murchison all have considerably smaller shares than the three UK partners. But a number of them are part of major oil groups which are playing leading roles in developing the North Sea. Norske Shell and Esso Exploration and Production Norway are part of the Esso and Shell groups, for example.

Shell and Esso both have interests in a large number of North Sea fields including the huge Brent field with its 220m tonnes of estimated recoverable reserves.

Other Norwegian partners which belong to groups with substantial interests in the North Sea as a whole are Amoco Norway and Mobil Exploration Norway. Last month Amoco was given permission to go ahead with the development of the North West Hutton field. Meanwhile, the Mobil group—Mobil is the operator on the Beryl field—is currently producing 115,000 barrels a day from the North Sea and is hoping to put forward plans for the development of the Northern part of the Beryl field soon.

Production

The group has introduced a number of new techniques to the development of Murchison, and for the first time work on the platform will be able to go ahead during the autumn months—previously companies have always had to wait for the brief summer weather window. Conoco itself claims it is now beginning to get a reputation for taking a new look at ways of doing things.

One of the other major partners in the Murchison field is investing almost as much as Conoco in the North Sea. The group reckons that by the mid 1980s its North Sea expenditure will total some £480m. By 1983 it expects to be lifting 80,000 barrels a day from the Continental shelf.

It has interests in the Dunlin, Thistle, Stafffjord and Hutton fields as well as Murchison, and it is the operator on a number of North Sea blocks though not on any fields as yet. Exploration work is now taking place on some of the blocks where Gulf is the operator and the group sees the North Sea as an area of increasing importance. Gulf will be looking to the North Sea as a major source of revenue over the next ten years, and it points out that the continental shelf is already the biggest single investment area for the group outside North America. It says that in the next few years the North Sea will be a "key" place for Gulf investment.

The third of the three major partners in the Murchison is the British National Oil Corporation. The corporation has played a growing part in the North Sea since it was set up in 1975 and now participates in the development and operation of all UK continental shelf oilfields. Participation agreements give it the right to buy 51 per cent of most North Sea oil produc-

**MATTHEW HALL  
PUSH THE BOAT  
OUT**

**MH** Responsible for the design of production facilities for Murchison.

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Ray Dafter

## Controls

CONTINUED FROM PAGE 11

ators, the main consideration turned out to be price.

This in turn would be influenced by the fabricator's ability to handle the large barges, up to 100 metres long, needed to transport the finished modules, since any double handling would increase the cost. Where two similar fabricators gave an identical price, the final decision would be made on an assessment of their respective track-records for previous work.

However, Matthew Hall suggests that the cards were stacked slightly in favour of UK applicants. Of five fabricators invited to tender for each of eight module packages, three might well be British, theoretically giving UK companies a 60:40 advantage over foreign interests.

William Press was that it was reluctant to take advice. Since it did not appoint a project manager, one had to talk to the yard manager.

Seen through William Press's eyes, the problem looks different. The yard admits that it has had labour troubles, including a three-month strike on the Tyne in 1973, but claims that it has since adopted a "new approach" which works very well, including weekly shop stewards' meetings. Owing to some "negligent" half-day disputes "some days" had been lost, but it had enjoyed a "good relationship" with the Conoco site team at its Howdon yard.

It rejects the full responsibility for failure to complete some of the Murchison modules, blaming high winds in January, which cost it a day and a half, and design changes by Bechtel, accounting for more than 50 per cent of the contract, and doubling the original design weight.

Whatever the reasons, delays in completion of modules were made less crucial by the three-month delay in floating out the platform's steel jacket at Ardersier in Scotland. And any additional onshore cost can be set against the cost of completing onshore work after installation off-shore—said to be ten times greater.

Time also can be partly regained. When he visited Linthorpe Dinsdale recently, Dennis Gregg was hopeful that more than two months of the three-month delay on the jacket would be compensated by employing different barges and, that, barring very bad weather, the Murchison platform would be hooked up on target by October.

Differences

Assessing differences between UK and Continental yards, Mr. Tucker notes that the latter have in the past enjoyed a longer working week. But they were now coming closer to the 40-hour week common in this country. They would have to maintain their performance by making premium payments or hiring more people on a job, where that was possible.

Even though a yard had to be large enough to handle some big projects, size was not always crucial in terms of management. Ponticelli was small enough to let the customer feel he had some say over the progress of his contract. On the other hand, the Dutch De Groot yard was large, but had strong external control.

A complaint heard about

Maurice Samuelson

**"We demanded a high quality job on a tough schedule and you delivered the goods on time."** Dennis Gregg, Vice President, CONOCO.

Mr. Gregg was referring to the Murchison accommodation modules and helideck—another multi-million pound contract supplied on time by Linthorpe Dinsdale, Redpath Engineering's module construction yard on the River Tees.

**Redpath Engineering Limited**  
Linthorpe Dinsdale, Middlesbrough, Telephone: 0642 240471 Telex: 587106

a subsidiary of the British Steel Corporation

# GULF OIL: COMMITTED TO AN EFFICIENT AND PROSPEROUS GREAT BRITAIN



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Gulf is also sharing in a new £350 million

project involving its refinery in Wales. This extension, in technical terminology a 'cat cracker,' increases the amount of petrol, diesel fuel, heating oil and other products that can be manufactured from crude oil.

The process will enable Gulf to provide millions of vital extra gallons of petrol a year to the country's petrol pumps. The project will also save us all a fortune on our oil import bill.

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Gulf Oil Corporation

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# We'll feed Spillers' little flour grader and build him up just like the rest of our family.



Profits of the Pig Improvement Company have increased fourfold since Dalgety took over 8 years ago.



Crosfields and Calthrop's profits have gone up fivefold since Dalgety bought them 5 years ago.



Since Dalgety took over Associated British Maltsters 6 years ago, profits have increased fivefold.

Like you, we have a soft spot for the little flour grader. But he hasn't grown very much over the years, has he? At Dalgety, however, we will give him the right support, so he can grow into a strapping great fellow. One who will feel very much at home in the Dalgety family of companies in this country.

**A thriving and prosperous family.**  
Our businesses dovetail very happily with Spillers'. We are in cereals, meat and agriculture and so, of course, are they. To give you some idea of the size of our operation in the UK, according to published industry figures:  
One pint of beer in every six is made with our malt.  
One supermarket egg in every twenty is ours.  
One pig in every twelve is bred from Dalgety bred stock.

Together, Dalgety and Spillers would become a formidable force.  
**We are builders not strippers.**  
We hasten to add that we haven't achieved successes such as those we show here by buying up companies and stripping their assets. We prefer to build businesses, as we have been doing now for over 100 years, and as we have already promised to do with Spillers.

But no doubt the Directors of Spillers will have their own point of view and we are sure they will put it to you strongly. Understandably, you may be left in two minds. So may we make a suggestion?

**Why not get an unbiased opinion?**  
Go to someone you know who will give you impartial and professional investment advice.

Take our offer document, this advertisement and Spillers' reply. Ask him or her two questions:  
1. Is your investment likely to show better growth with Dalgety, or with Spillers?  
2. What will happen to the price of your shares if this merger does not take place?

We think we know what his advice will be. And we look forward to a long and fruitful association with you.



John Elliott on the hopes and problems of an industrial co-op on Ulster's frontier with the Republic

# Adventurous co-operation on the border

THE TROUBLE-TORN border area of Northern and Southern Ireland is not one of the first places that one would look to find a potentially significant development in community-run co-operatives. Yet such a development is taking place in the Catholic-dominated Ulster town of Newry and in nearby Crossmaglen. It is the result of an initiative by the area's retailers and businessmen who are concerned that the sectarian troubles of the past decade are leaving them and their children with little industrial or commercial future.

Unemployment in the town of Newry, which has a population of 15,000, stands at 30 per cent—the third worst level in the UK. There is little prospect of school leavers being found jobs, or of new small firms being found industrial premises.

The town is sited within a few miles of the Irish border in an area which the local Catholics insist was ignored until relatively recently by the old Stormont Government.

A few miles away is the Republic stronghold of Crossmaglen—a desolate village dominated by its beleaguered army post which was visited by the Prime Minister during her flying visit to Ulster last month.

Now, because of the initiative taken by local businessmen, an old factory in the centre of

Newry has been turned into the Newry and Mourne Co-operative Society's headquarters, providing employment for 160 people. There is a Government-funded training workshop teaching 70 local youngsters various skills, plus premises occupied by a handful of other small businesses. In Crossmaglen, an old building just across the street from the army post is being renovated into another Government-backed training centre for about 30 school leavers.

**Survival**

The venture is regarded as a co-operative because it is owned by some 600 local people—mainly retailers and industrialists—who have subscribed between £5 and £1,000 each to the share capital of the society (although it owes its survival at present not to these subscriptions but to a £350,000 a year subsidy from the Northern Ireland Department of Manpower Services job creation programme).

The idea for the co-op came about six years ago from members of the local Credit Union—a co-operative type of local savings group which is quite common in Ulster (where 100 such unions have 84,000 members and £16m total assets) and also in North America. Credit unions can only invest in gilt-

edged securities, so the Newry union could not itself start industrial businesses.

The union's members got together and decided to form a separate co-operative registered under Ulster's Industrial and Provident Societies Act with the primary aim of creating jobs and industrial opportunities in the area. Under the Act, shareholders have only one vote each, irrespective of the size of their investment, and only 5 per cent of the profits are distributed.

About half the retailers in the town have subscribed towards the co-op, along with some owners of industrial businesses; but hardly any of the employees have become shareholders. In total about £40,000 was collected in 1978-79 by a fund-raising committee which organised street and bingo hall collections, a town square "barometer" showing progress, car stickers, and other activities. The Allied Irish Banks, which have a large branch in Newry, backed the project to the tune of £35,000, and another £25,000 (making a total of £100,000) was raised from a businessman with an interest in a factory bought by the co-op.

To begin with, the co-op started an upholstery business, which eventually failed because of a lack of local upholstery skills, a lack of orders, a poor product range, and inadequate

supplies. Then a local Reckitt and Colman potato-processing factory which had closed, putting 140 people out of work, was bought by the co-op with its £100,000 and was christened the WYN (Work in Newry) Industrial Estate.

The co-op's policy is to split off registered companies as subsidiaries to run its various projects, each company's shares being split in two with the co-op holding all the voting shares while other interests can have non-voting shares. This is done primarily to ensure that the policy-making is kept in the hands of the co-op itself which is run by a 15-man management committee on behalf of the 600 shareholders. The arrangement also helps to protect the co-op from the impact if any of its subsidiaries fail and close down (as happened eventually to the upholstery company).

In line with its devolved policy, the co-op set up a company called Newry and Mourne Developments to run the old Reckitt and Colman factory which covers 60,000 sq ft. The factory now has a number of small firms as tenants employing a total of 60 people and carrying on businesses that include a car parts distributor, a Volvo luxury servicing depot, and engineering workshop, a bathroom fittings manufacturer,

and a car-seat cover manufacturer. Many of these are new businesses.

The training workshop takes up the major part of the factory and is run by a separate company called Mournecraft set up in December 1977. This is funded with the £350,000 Government grant covering one-year training periods for the school leavers, all of whom must be under 19 and have been unemployed for at least six months to qualify for the Government grants.

**Frivolous**

Mournecraft has not yet started selling any goods and is regarded primarily as a training concern. But its work provides the base for the co-op's future because it is hoped that several of the 80 or so youngsters being trained by 17 instructors will become good enough at their crafts to set up in business themselves, either within the co-op or elsewhere in the town.

They are learning skills such as leatherwork, wood carving, harp and guitar making, furniture making, screen printing and pottery.

Sceptics say that these are frivolous skills that will stand the youngsters in little stead. The co-op's general manager,

Frank Dologhan, who was one of the creators of the initial co-op concept and runs the business with a staff of four, denies this, however. He and the local businessmen who have encouraged the various co-op companies believe that there is a good enough tourist trade throughout Ireland to take the goods and that the dwindling basic industrial life of Newry provides little incentive for youngsters to learn basic industrial trades. The co-op may also become a subcontractor for certain lines to other businesses.

All this, however, is still in the future and the only commercial record of the co-op so far (apart from the training workshop and the rental of small business premises) is the upholstery business that eventually shut down, and another school furniture venture that has had to be shut, possibly only temporarily, because of a lack of orders. This can be traced back to cuts in government spending.

But the leaders of the co-op are pleased with what they have achieved, even though they have yet to make a significant mark on the unemployment of Newry. They are now developing the training workshop in Crossmaglen and have their eyes on another recently closed factory in Newry. They also want to develop other projects such as



Harp-making: one of the crafts being learnt by youngsters in the workshops. It is hoped that, once trained, they might start up their own businesses.

providing a managerial and administrative advice service for small firms, and a skills bank where the expertise of large companies can be directed towards small firms. A marketing company is also being set up which might enable the co-op to become an agency for hand-craft goods made and sold in Ireland.

Like other co-ops, however, the Newry venture is short of capital and still carries out regular fund raising. Ultimately its founders would like to see it developing as a centre for a community of co-ops like the Mondragon bank and managerial advice centre in the Basque area of Spain, and as a State-backed development agency for the area.

First however it has to show that it can make a success of its initial role as a community co-op set up to "create jobs and make profit."

## Management abstracts

These summaries are condensed from the journals of abstracts published by Anbar Management Publications. Readers wishing to consult original texts should write to: P.O. Box 23, Wembley HA9 8DU.

Co-ordination of National Legislation regarding Annual Accounts. L. Lourdes-Petit in *European Journal of Accountancy* (Journal UEC) (Fed. Rep. of Germany), Oct. 78/Jan. 79: p. 277 (10 pages)

Compares in tabular form the requirement of the European Economic Community's 4th Directive and of the proposed 7th Directive with International Accounting Standards and with the accounting standards and procedures followed in UK, France and West Germany.

The Further Education of Company Personnel. D. Visser in *Manager Magazine* (Fed. Rep. of Germany), Jan. 79: p. 80 (4 pages, illus. in German, English version available).

Reviews the extent to which named German companies spend money to provide "further education"—both in-house and external—for their employees with particular reference to recent efforts to economise, and the effect such efforts have had (or have not had) on bookings for external courses.

Back to Basics in Marketing. H. R. Arnold in *Abatzwirtschaft* (Fed. Rep. of Germany), Mar. 79: p. 24 (1 page, in German, English available).

A German marketing man suggests that marketers now rely excessively on information of one sort or another, so much so that they have little or no time left for direct contact with their market (which cannot be delegated).

A SAD story appeared in newspapers recently about a 37-year-old man who died as the result of being "cut" by a rosebush. The cause of death was tetanus, a cruel killer of man and animals throughout the ages and everywhere in the world.

Doctors in the admitting hospital "found two pieces of rosebush in the thigh wound," said the report. Presumably these were thorns from dead branches, because living thorns may scratch badly but do not break off readily and so are rarely found in wounds.

Tetanus is not uncommon; at the best it is serious and at the worst fatal. It is caused by a bacillus or clostridium which is happiest browsing in decaying matter in the absence of oxygen—in other words, it is an anaerobic saprophyte. Ideal conditions exist in manured ground and in the intestines of cattle and horses. Reproduction is by the production of spores which can live for many years

and can, so it is said, withstand up to 20 minutes of boiling.

Invasion of man by these organisms is not intentional. A large gaping wound—unless it is stitched while still contaminated—is of no use to Clostridium tetani because, although there is tempting dead tissue, there is also air, which is unattractive to the organism.

The most desirable residence for Clostridium tetani is a puncture wound—and what could be better than that occasioned by a dead rose-thorn? The skin closes behind and produces a snug, airless den wherein the creature can enjoy dead tissue.

If this was all that it did, there would be little to worry

about: unfortunately, a powerful neurotoxin is produced and this tracks up the nerves to the central nervous system, taking as little as four days from a situation near the brain, but sometimes up to four to six weeks from distant parts such as the feet.

Although local reaction at the site of entry is, unhappily, trivial, the events following the arrival of the toxin at their target are appalling. Often spasm of the muscles used for eating are affected first and cause "lockjaw," as the disease is known colloquially.

In paradoxical contrast to the sufferings of the patient, he may appear to smile grotesquely (risus sardonicus) due to facial muscular paralysis. Within a few hours or days, the muscular spasm spread to the limbs and trunk and arching of the back can resemble the effects of strychnine poisoning.

Many muscles became involved in violent and painful spasms and some patients die early because of involvement of

the throat and neck so that asphyxia ensues. Even if the patient is spared this horror, the painful, frequent spasms (often excited by noise) steadily increase, and his life may be terminated by heart failure or utter exhaustion.

Until the early years of this century, tetanus deaths were very common. Then, during the great advances begun by Pasteur, an antitoxin was produced. This consisted of specific serum (obtained from treated horses) which neutralised the tetanus toxin. Although rarely successful if the disease became established, it was of value in its prevention.

It was invaluable in the 1914-18 war, in which the disease was tragically common in the well-manned farmlands of Flanders, wherein deep wounds and clostridium tetani were in abundance.

There was a major problem. Some people are allergic to horse serum and thus the passive immunity obtained sometimes proved as deadly as tetanus.

**BY DR. DAVID CARRICK**

## The terrors of the tetanus toxin

The injection of adrenalin could reverse the process if given in time.

In later years, means for providing active immunisation were introduced. In the modern versions, clostridium tetani toxin is treated in laboratories with formalin and rendered harmless. But the human body fails to realise this and produces its defensive means just as it would for the genuine article. Such protection lasts for several years.

Although very severe allergic reactions do not occur with this, some local swelling and pain may be troublesome and, perhaps, a serum-sickness (which is exceedingly unpleasant) may occur eight to ten days later.

This vaccination programme (a course of three injections) against tetanus is a somewhat complicated matter—for the doctor rather than the patient. All casualty departments of hospitals will know about it, however. Immunisation to produce immunity can still lead to problems with allergies as

horse-serum is still employed, and all patients should inform the treating doctor of any allergic problems from which they have suffered.

Fortunately, a relatively recent product, Humote—which is obtained from human donors who have high levels of anti-tetanus following active anti-tetanus vaccination—is available and appears to be very innocuous as regards allergic manifestations.

Treatment of established tetanus nowadays is by tetanus antitoxin, but the major problem has always been the alleviation of the dreadful muscular spasms. In 1878 an eccentric naturalist suggested that the deadly poison, Curare, which paralyses musculature, might be the answer. But it was not until the mid-1930s that major work was carried out with the poison and success was obtained. Now a modern product, Tubocurarine, is used with safety and frequent success.

But nobody should forget that tetanus is vile and deadly. Everyone should be vaccinated. If anyone is unfortunate enough to receive a puncture-wound or any injury in which pathogens can lurk, they should clean it thoroughly, use antibiotics, and then obtain appropriate anti-tetanus treatment.

# 10p can buy you a rent free factory for a year or more.

Recent changes in Government Regional Policy make steel closure areas even more competitive, particularly if a project is considered good for the Country's economy. So if you're expanding or re-locating your business we, British Steel Corporation (Industry) Ltd., can offer you a wide choice of attractive British locations.

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All you've got to do is contact us. If you've a viable project that will create new jobs, whatever the size of your company we'll back it and make it happen. Call our Action Desk now on 01-235 1212, Ext 200 or post the coupon and see just how much ten pence can buy you.



**BSC (Industry) Ltd.** 42 Grosvenor Gardens, London SW1W 0EB.

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# PIA

## Great people to fly with

هكزا سن الة دل

# Obesity kills.



A fat warehouse, like a fat man, is an unhealthy one.

Usually, the problem is not that too many goods are going in. It's that they're badly arranged.

Rent, overheads, breakages and wage costs rise. So production and profits fall.

Stock levels and picking times increase, and customer service declines.

And, according to the evidence, the condition is a common one.

More than half the companies examined in a survey by the Department of Industry had an inefficient storage system.

And the total waste in British industry is more than £2,000 million a year.

It might seem that the answer to the problem is bigger warehouses. In fact, the answer is usually smaller warehouses, as many of our case-histories show.

In one case, we installed mobile shelving which reduced the width of the gangways.

Storage area was halved, which freed space for

extra production. Storage capacity was increased by 20%.

Picking times were reduced by 60%.

The investment paid for itself in 18 months.

In another case, we made use of wasted roof-space with high rise, narrow-aisle pallet racking, together with two stacker cranes.

Storage capacity was increased by 80%, with no increase in storage area.

Product damage was reduced by 80%, overheads by 30%, and picking times by 20%.

You can read 100 of our case-histories in our "Book of 100 Answers."

And we can plan, supply and install anything from a bay of shelving to a complete automated warehouse.

Which should help, whether your company is large or small, to improve its state of health.

 **DEXION®**

We'll help you make money out of thin air.

# Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

## COMMUNICATIONS

### New group formed to promote teletext

HAMBERS BANK, together with Modular Computer Services Inc. (MODCOMP) of the United States and Alphameric Keyboards of Woking, have formed a joint company which will seek a leading position in the market for providing custom-built systems for commercial "Viewdata" users.

Bishopsgate Terminals, as the new group has called itself, was announced at the recent opening of MODCOMP's first computer manufacturing facility outside the United States—at Wokingham, Berkshire.

Organisations currently selling Viewdata systems are strongly influenced by the home-user market, and the opportunity for tailor-made hardware in business applications has been neglected to some extent. Bishopsgate has been formed to design, manufacture, and sell to the commercial market.

Current Post Office estimates suggest that 70,000 domestic TV

sets will be connected to Prestel in 1980.

Bishopsgate's estimate is that the potential private commercial Viewdata market will equal this in money terms. It believes the commercial market will continue to grow strongly thereafter for several years.

Potential customers include the established database. For this user, the Viewdata system offers an efficient and economical method of disseminating information from that database to executives who "need to know." Each location will have a robust commercial keyboard and have the information displayed on a colour TV screen in easily-read page form. Information can be transmitted (via automatic dialup) by ordinary telephone lines, by leased PO lines and by internal lines.

Bishopsgate Terminals, Mnlly Millar's Lane, Wokingham, Berks., RG11 2QT. 0734 788711.

### Compact mobile radio

THE K9 series of British designed and made vhf mobile radio equipment is offered by Blick International Systems, employing frequency modulation and operating between 146 and 174 MHz.

Base station unit is rated at 20 watts and has 12.5 kHz channel spacing for up to six channels. The unit measures 330 x 102 x 225 mm and weighs 7 kg.

The mobile set is of solid

state design and has an output of 20 watts rf, with a built-in loudspeaker delivering three watts of audio power. Dimensions are 185 x 52 x 144 mm and the weight is 1.3 kg.

Full details of the K9 series, which can be purchased or rented, and for which Home Office approval has been obtained, can be obtained from the maker, Blick International Systems, Bramble Road, Swindon, SN2 6ER (0793 692401).

## INSTRUMENTS

### Will detect unwanted gases

KEMTRONIX OF Compton, Nr. Newbury, has new portable ozone and nitrogen oxides monitors, Models 2000 and 2200. These will simplify and bring down the cost of air pollution surveys.

Both are portable. They can either be battery or mains powered and even with battery packs installed weigh less than 22 lbs each. The monitors use a highly specific chemiluminescence detector system which is based on the measurement of light generated during the reaction between any of the gases and ethylene.

Since each of the reactions emits light of a characteristic wavelength the system is highly accurate and insensitive to interfering gases such as sulphur dioxide, which may be present in the reaction mixture. A built-in ethylene gas storage bottle with sufficient capacity for up to ten hours monitoring is incorporated in both monitors.

Sampler gas concentrations are directly readable in ppm from the large meter display on the front cover and each model has switch-selectable sensitivity ranges of 0.05, 0.10, 0.20 and 0.5 ppm. The minimum detectable concentration is about 0.1 ppm for both ozone and nitrogen oxides. Zero drift in the Model 2200 is kept to below 0.01 ppm over an 8 hour sampling period by the incorporation of a 5 second cycle switching system for the measurement of NO and NO<sub>2</sub>.

The company has already committed £40,000 to the purchase of the new Hewlett Packard 64000 logic development system, a universal development device that can be used for products made by a number of the major semiconductor companies.

Livingston has also appointed Jermyn Mogul Systems as supplier of MDS products available from the majors and will be spending about £260,000 on these items which will be available virtually off the shelf.

Negotiations have also been completed for the opening by Livingston of a subsidiary in Sweden and it is understood that similar plans exist for France for early 1980.

Much of the company's success in the hire of instruments and other small electronic equipments has been due to the early use of a computer system for the control of orders, stock, invoices, credit, etc.

There are now about 2,000

customers on the books and the items for hire vary in cost from about £7.50 to £350 a week. The problem of checking where each instrument is, its availability, the credit position of the customer and similar business parameters is taken care of by an Allied Business Systems machine with terminals in the major departments of the company.

The company claims to be able to give a telephone inquirer an answer in a couple of minutes and if the unit is available, supply it within 24 hours. Each time changes of any sort are initiated by one of the terminal users, the whole system's data is updated straight away, with no chance of double booking.

Managing director Patrick Robson believes there is still a big untapped market for his company's services among companies that do not appreciate the advantages of hiring rather than purchase, capital does not have to be raised and there is far less prospect of equipment being left idle on shelves.

More from 27 Camden Road, London NW1 9NR. (01-267 3252).

### More available for hire

NOW IN a position to offer more than 650 instrument types and with a turnover exceeding £2.5m, Livingston Hire is to move more strongly into the supply of microprocessor development systems.

The company has already committed £40,000 to the purchase of the new Hewlett Packard 64000 logic development system, a universal development device that can be used for products made by a number of the major semiconductor companies.

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There are now about 2,000

### Has fifty channels

INPUTS FROM up to 50 sensors can be plugged into the front panel of a rugged cassette recorder available from Grant Instruments (Cambridge), Barrington, Cambridge CB2 5QZ (0763 60811).

Measuring 365 by 425 by 150 mm and weighing 7.5 kg the unit has a stainless steel weatherproof case and is intended for the long-term monitoring of quantities such as temperature, humidity, wind speed, rainfall, pressure and solar radiation. The case is weatherproof and the unit will operate in ambient temperatures from -20 to +60 degrees C.

A standard 1 inch tape cassette is used with simple loading and control procedures that can be carried out with the hands gloved.

On each strip of the inputs a level is taken from each sensor, followed by a record of time and identification number. Cycles are initiated at intervals that can be pre-set by the user between one and 999 minutes. The scan itself takes two seconds or less.

Conditioning circuits are available for various kinds of input, and a companion playback device can be supplied.

## FINISHING

### Bare metal coated fast

AN INCREASED range of specialised finishing processes are about to become available at Hankoe Stove Enamelling's, Slough works.

As reported on this page on July 16 Hankoe has spent over £100,000 on new plant and with a reorganised board of directors (Ian MacGregor, chairman, Stirling Moss, C. Dopsch and H. Hancock) it aims to provide a fast service—fast processing the factory because usually the quicker bare metal gets a protective coating the better (especially in view of the rigid coating specifications that are now often demanded) and fast completion and delivery of treated components to the customer.

Delay between processes has been minimised by locating shot blasting equipment close to the painting plant and with two conveyorised infra-red ovens in operation it is now possible to finish 6,000 items in a day.

Apart from the normal shot-blasting work on ferrous components and fabrications, Hankoe specialises in ultra-fine surface finishing. Specially-engineered machines are used for the frosting of fragile glassware; the "pearl lustre" finishing of stainless steel medical equipment; and for meeting the most exacting specifications for the aerospace industries.

Stirling Moss's very close involvement in the Hankoe operation has accelerated the company's work in the minor racing world and many leading constructors and component suppliers now send their work to Hankoe. Restoration of vintage and classic vehicles—a field in which chairman Ian MacGregor specialises—also provides the company with some unusual tasks.

Hankoe's works are at 823 Yeovil Road, Slough, Berks (0753 22779).

### Automatic spray painting

CONVEYORISED PLANT for painting metal pressings and castings, up to 7.5 cm diameter and 33 cm high is being produced by Berridge Engineering, Queens Road, Beeston, Nottingham (0602 258291).

Output is 35 to 45 components a minute using only two operators, one to load and the other to unload the components. As the painting process is automatic using a electrostatic guns, the finish is consistent and paint wastage minimal, claims the company.

Components to be painted are

carried on spindles mounted on a bench level conveyor through an infra-red tunnel which pre-heats them before they enter the spraybooth. There the conveyor takes the parts around the spraying head where they are rotated and coated. A one-coat finish is applied, the solvents evaporating almost immediately because of the pre-heating.

Overall size of the plant is about eight metres long, 2.3 metres wide and 2.2 metres high.

## CONSTRUCTION

### Ensures a very strong fastening

CONVENTIONAL methods of fixing into all types of concrete and masonry—such as plugs, expanding anchors and shot-fired pins—can now be superseded by a new method called the Tapcon system, announces Buildex (division of ITW) Darville House, Oxford Road East, Windsor, Berks (075 35 57721).

Tapcon anchor taps its own thread directly into concrete, eliminating separate plugs and

screws or inserts of any kind and its double high and low profile thread form is said to give pull out loads more than twice that reached with equivalent size ordinary plugs and screws. System can be used with standard drilling machines with which most tradesmen are already equipped and is completed by the Concrete installation tool and Buildex masonry drill bit.

Dual purpose Condrive tool

drills the hole to the correct depth and diameter and is then used to drive the anchor.

Significant advantages promised by the new method are speed of installation (giving low in-place cost), consistently high pull out loads, no hole alignment problems, easily removable and, as it does not rely on expansion principle (and there are no spalling effects) it can be used for close in the edge fixings.

### Speeds rate of grouting in tunnels

THE SPECIALIST tunnelling equipment division of the Rees Hough group, Tunnequip, says it has developed a tunnel grout pump which speeds up the rate at which backgrouting can be carried out after segmental tunnelling.

The unit which incorporates a 7 hp air-operated pump with

5 cm (2 inch) delivery is coupled to an air motor and the complete unit is mounted on a bogey for operation on either 457mm (18 inch) or 610mm (24 inch) rail track. Grout is delivered at 6,350 litres/hr at 30 metres (1,400 gals/hr at 100 ft) head and operates up to a pressure of 3.5 bar (125 psi).

The pump is reversible for self-cleaning and can be used as a normal pump for clearing accumulated water from the shaft or the tunnel face. More information about the equipment can be obtained from Tunnequip at Cotteshall Wharf, Godalming, Surrey GU7 1NB (048563 5641).

### More comfortable in the queue

BASIC UMBRELLA concept of existing bus shelters has been superseded in the Royal Borough of Kensington and Chelsea by the installation of a deluxe modular design, occupying an area of 23 by 8 ft, and incorporating a newspaper kiosk and telephone booth.

Sited outside the Odeon cinema in Kensington High

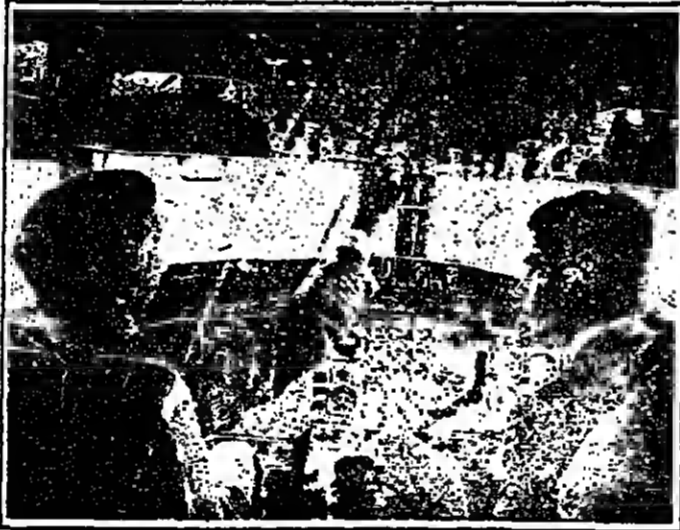
Street, the new shelter heralds the installation of the first 150 new Mills and Allen shelters in London, and it is hoped that the model will be universally adopted throughout the UK.

Variety of different layouts include a kiosk, a PO telephone, split queuing area, art panels and illuminated posters—and the shelter is lit up constantly to discourage vandalism.

Construction features toughened glass surrounds which will carry the logo of the local borough or transport authority and panels which will carry transport maps, timetables, posters and art boards.

More from the company at Broadwick House, 15, Broadwick Street, London W1 (01-499 9541).

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Our pilot's professional tradition has followed one of the most brilliant trajectories in the history of commercial aviation.

And we feel that our prestigious Pilots School has played a significant role in building the solid reputation of Spanish pilots.

There, our pilots—and those of some 15 other airlines—are continually brought up-to-date with the latest techniques and some of the most modern equipment in the world.

Our school's teaching system integrates the latest advances in aeronautic technology, flight simulation and real flight. We even employ a fleet of planes for this.

The result? Don't be surprised if, someday, the rest of the passengers applaud one of our pilot's soft landings. It has been earned with thousands of hours of experience.

This is Iberia today. But we want to be better.



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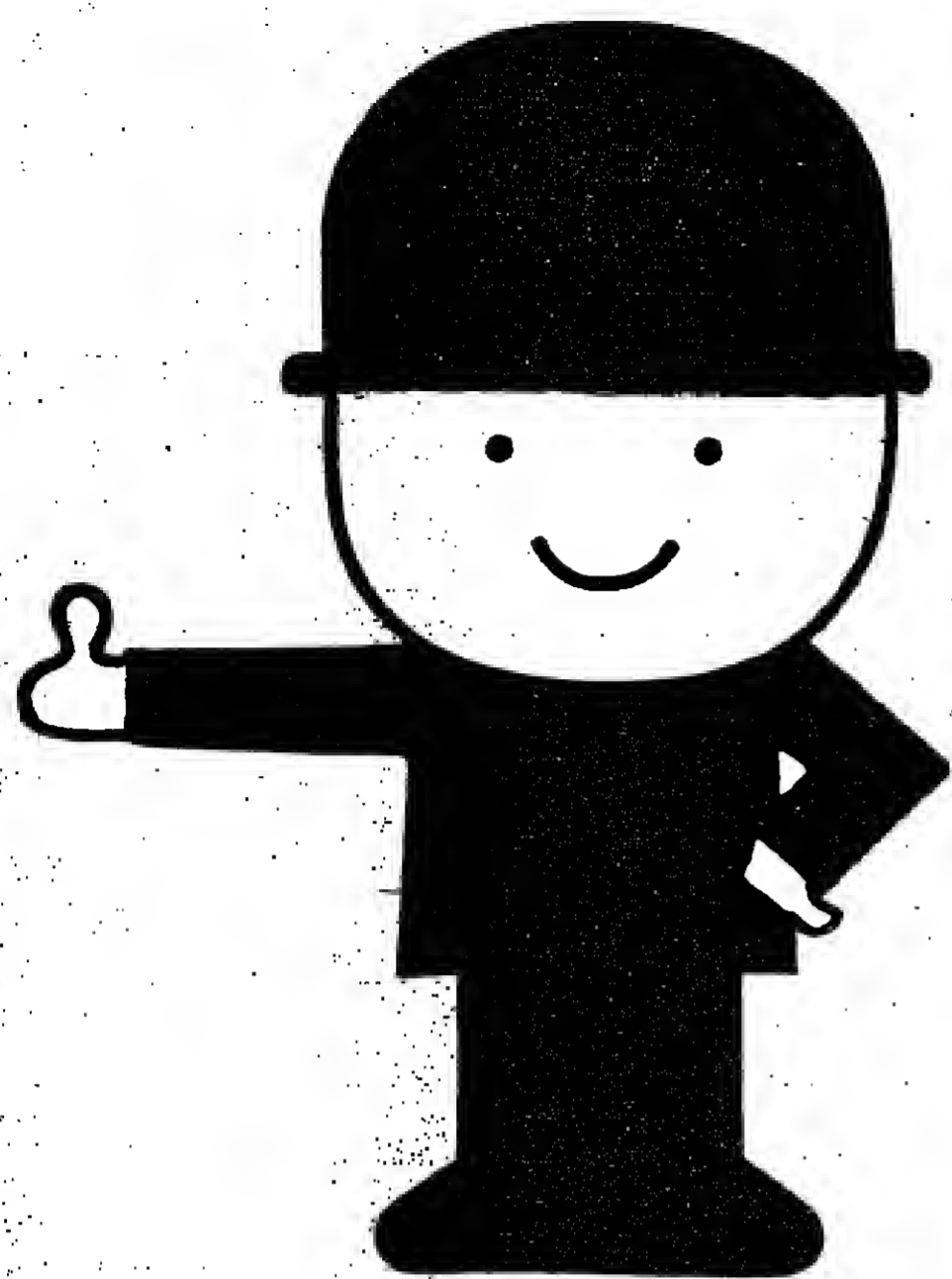
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# SPILLERS or DALGETY?

**Spillers** have forecast profits for this year at around £15m and have a good base for future profits growth.

**Spillers'** dividend is increased by 67% to 3.4p per share.

**Spillers** employees, board and customers are opposed to the offer.

**Spillers** have built up a highly successful range of branded products which includes such household names as Homepride, Slimcea, Winalot, Kennomeat, Spratts and Tyne Brand.

**Dalgety** have *not* forecast profits for this year. Their profits are uncertain and could well fall sharply.

**Dalgety's** shares would give a lower income — equivalent to 3.33p for each Spillers share.

**Dalgety's** own board was not even united in making the proposal.

**Dalgety** have very few branded goods.

**Your Chairman's message is clear.  
Ignore the offer. Do not sign any document sent by Dalgety.**

*The Directors of Spillers Limited have taken all reasonable care to ensure that the facts stated and the opinions expressed herein are fair and accurate and they jointly and severally accept responsibility accordingly.*

LOMBARD

The silly myth about the IMF

BY SAMUEL BRITTON

THERE CAN BE few institutions the reality of which is so different to the myths which surround them as the IMF. The fund is frequently denounced, especially on the British Left, as a hard-hearted monetarist institution anxious to bring about deflation and unemployment, and only too pleased if this leads to the toppling of socialist governments. On the right it is seen as a noble force for financial virtue in a wicked world, and British Conservatives frequently said that the last Labour Government curtailed public spending and monetarist expansion, "only" because it was forced to do by the IMF.

Anyone who has had even a few casual conversations inside the lavishly appointed fund building in Washington will know that this is a fantasy picture. The fund officials have, of course, no independent power, but are advisers to member Governments in which role they have to compete with national officials and central banks. The people who decided that the UK would have to accept a "tough, but not too tough" package in 1976 were the U.S. and German Administrations.

Of course the IMF staff has some say and some policy lines of its own. But as its 1979 Report makes clear, it is firmly on the Keynesian side in the Keynesian-monetarist debate. This will come as no surprise to anyone who has heard complaints in the IMF building about the allegedly over-restrictive policies of the Germans and the Japanese, or worries that even the British were putting too much reliance on monetary policy.

The 1979 report takes for granted that world output is demand-constrained; and on its very first page expresses surprise that although domestic demand management has recently proceeded on lines agreed at international meetings, these policies have had disappointing effects on both unemployment and inflation. Indeed inflation began to accelerate again in most countries earlier before the oil price increases, which is treated as a bolt from the blue.

This is in sharp contrast to the GATT Report, published a week ago, which stated that it is the out-dated economic policies of Western Governments—and not the oil price increase—which are responsible for the fresh wave of unemployment and inflation in the West. Both

ONE OF the many important cases due to be heard by the House of Lords in the new law year starting on October 1 is a decision of the Court of Appeal on what is meant by the phrase "money or money's worth" in Section 13(2), Land Charges Act, 1925. Does it mean what it clearly says, or does it import the idea of a fair and reasonable value?

In *Middlow Trust Co. v. Green*, Lord Denning thought that the words did have an extended meaning of a purchase for an adequate sum. He could not believe that Parliament had intended to protect a purchaser who paid far less for a piece of land than the land was worth (particularly if the purchaser was in collusion with the vendor) as against a person who had previously acquired an option to purchase the land, but had mistakenly failed to register his option to purchase from the vendor in the appropriate Land Registry. "Money or money's worth" means a fair and reasonable value in money or money's worth, not an undervalue—particularly a gross undervalue as here.

Lord Justice Eveleigh agreed with him, while Sir Stanley Rees, in supporting the trial judge's finding, dissented. The judicial view is two-fold, with five Law Lords to go.

The facts of the case represent a family saga that has spawned a spate of litigation; sections against members of the family, against vendors and solicitors over the past six years. A Lancashire farmer had two sons who farmed the land. Separate farms owned originally by their father. One farm of 700 acres he farmed with one son; the other of 275 acres he farmed with the other son.

The farm at the time of the conveyance in 1957 was worth

A litigious farming saga

at least £40,000, and it was not unreasonable to expect that it would increase in value. (During the option period of ten years the son would have had to pay only £22,275.) Now it is worth nearly £1m.

Two issues loomed large in the ensuing court battle. First, was that the conveyance was a sham, in the sense that it was not the purchase of a legal estate but merely a gift dressed up as a sale, with the avowed purpose of defeating the option.

the transaction unattractive to the objective bystander. But it was not a sham, and could not be converted into one because the motive was, to say the least, an unworthy one.

Lord Justice Eveleigh had an ingenious way round this argument. He did not think that the conveyance was sham, but he considered that the price for the purchase expressed in the conveyance was a sham. It was not for the £500 that the property was conveyed. The true transaction was a gift coupled with a token of £500 sought to be included to meet the requirements of the law relating to unregistered options. Lord Denning averted such niceties. He found the transaction so distasteful that he was prepared to condemn it as fraudulent. The difficulty about Lord Justice Eveleigh's point is that the conveyance and its contents did not say anything other than was the truth. It was transparent that the £500 was little more than a token payment for a farm then worth £40,000, and on any exercise of the option worth £22,735. So long as it was not illusory or nominal, the law would not investigate the adequacy of the purchase price.

The case thus resolved itself into the narrow question of construction of the phrase "money or money's worth." The majority of appeal judges had no hesitation in holding that Parliament must have intended that the phrase should have an extended meaning that the payment was

THE WEEK IN THE COURTS

BY JUSTINIAN

there was the question of fraud. If fraud was established against the mother and father, then the gift would be void. The £500 was merely a device to give the gift the colour of a sale.

In law a sham is a transaction that seeks to pull the wool over the eyes of a third party. It is not a sham simply because it was carried out with a particular object or purpose, however reprehensible that object or purpose.

The deed of conveyance of 1967 had recited that the father had agreed to sell the farm for £500 to the mother. The £500 was in fact paid for the farm. The parties intended that the father should be conveyed from the mother to her. The father's motive was to defeat the son's option, that the price was exceedingly low, and that the normal steps of a written deed of conveyance were not followed.

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French end their losing spell

THE FRENCH, who until Saturday had suffered a long spell of almost total failure with nearly 100 challenges, sent across the Channel in search of prizes in the past two seasons, saw Son of Love and Soleil Noir fight out the St. Leger final.

Now it seems probable that several leading French trainers—notably Francois Mathet—will feel less disillusioned in

With an eye to next season's principal middle-distance event, the second-season filly, The Dancer's win in the Mayhill Stakes is well worth noting. Leading from the outset in that mile event, The Dancer always looked capable of maintaining her advantage, in spite of a strong challenge from the favourite, Schweppes Forever, inside the final 2 mile. The Dancer, a good-looking

by daughter of the Charlottesville mare, Khazaeen, who is herself a half-sister to Blushing Groom's dam, Runaway Bride had previously run well to finish fifth behind Mrs. Penny and Abern in the Cherry Hinton Stakes, after a long lay-off. The form of that Newmarket event, was given a fine boost 80 minutes before the Mayhill Stakes through Abern's triumph in the £10,000 Flying Childers Stakes and, in retrospect, the Dancer's starting-price of 9-2 represented exceptional each-way value.

SANDOWN 2.15-Maryshire 2.45-Andelys\*\* 3.13-Moon God 3.45-Valour WOLVERHAMPTON 2.00-Fantasy Royale\* 2.30-Knees Un 3.00-British Crown 3.30-Sky Chief\*\*\* 4.00-Spy Chief\*\*\* 4.30-Tarnished Image 5.09-Persico

RACING

BY DOMINIC WIGAN

THE economic prospect of sending riders over and we will see a steady increase in a flow of traffic which had become somewhat one-sided. There was certainly no fluke about the ascendancy of the French pair on Saturday. Separated by a head in the Grand Prix de Paris, in which

Channel is the only IBA company transmitting programmes during the present industrial dispute. Details of this local service are given below.

CHANNEL

1.20-1.30 pm Channel Lunchtime News, What's on Where, 5.00 Puma's Birthday Greetings, 5.05 Woody Woodpecker, 5.10 The World of David Copperfield, 5.15 The World of David Copperfield, 5.20 The World of David Copperfield, 5.25 The World of David Copperfield, 5.30 The World of David Copperfield, 5.35 The World of David Copperfield, 5.40 The World of David Copperfield, 5.45 The World of David Copperfield, 5.50 The World of David Copperfield, 5.55 The World of David Copperfield, 6.00 The World of David Copperfield, 6.05 The World of David Copperfield, 6.10 The World of David Copperfield, 6.15 The World of David Copperfield, 6.20 The World of David Copperfield, 6.25 The World of David Copperfield, 6.30 The World of David Copperfield, 6.35 The World of David Copperfield, 6.40 The World of David Copperfield, 6.45 The World of David Copperfield, 6.50 The World of David Copperfield, 6.55 The World of David Copperfield, 7.00 The World of David Copperfield, 7.05 The World of David Copperfield, 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THE ARTS

New York architecture

Up on the museum roof

by FRANK LIPSUS

Having got a late start in fashioning New York to their taste, the present generation of architects and builders are doing the next best thing: tearing down what already exists, or "punch-backing" new high-rise structures on landmarks that cannot be eliminated altogether.

building to be built to the first place. In addition to a complicated law that allows the museum to sell its air rights (for \$17m), it will receive the income that otherwise would have gone to the city as real estate tax. This income will amount to about \$2m annually.

building erected. It has been on the drawing boards for more than two years, and after a change in developer and initial defeat of its special legislation, it has mobilised considerable political influence and public-relations efforts on its own behalf. As in the quotation about

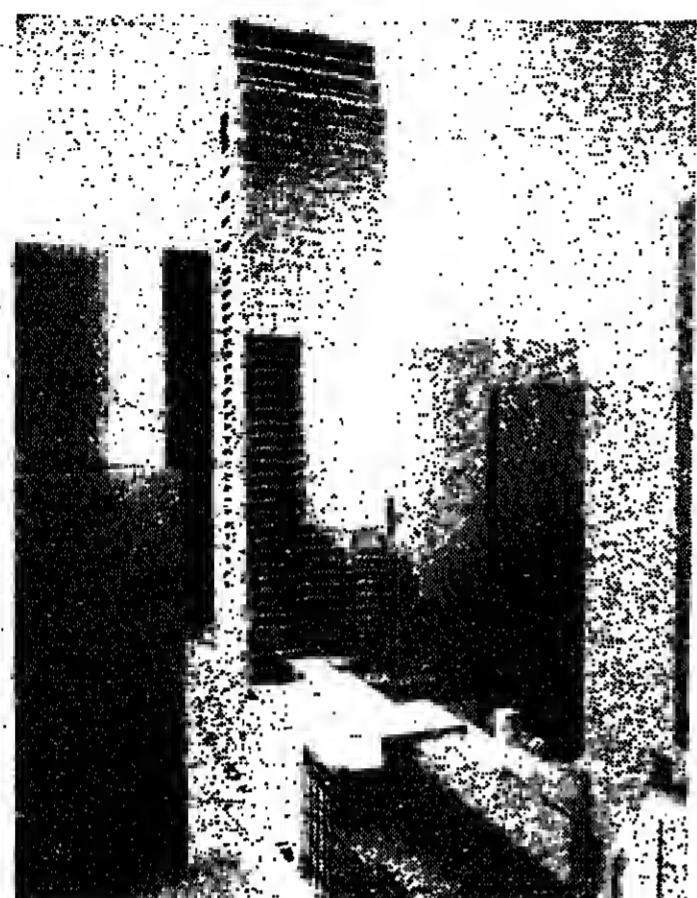
manager considered the discrepancy an unfortunate choice of words because, he said, the major energy-conservation measures will be windows that open. Windows that open are not only standard, especially for residences, but they are still hotly debated in energy-conservation circles.

Minor as these distortions may be, they show the precarious balance of the museum's public role. Long the beneficiary of wealthy patrons, including the Rockefellers—who provided the museum with its first premises on another site—and other notable New York philanthropists, the museum has outgrown its dependence on private donors. Its public programme, especially a constant and enlightening series of film showings, attract huge audiences, who support the museum with membership and entrance fees.

Still, the museum has operated in deficit for more than ten years now, and besides the \$17m gained in the air-rights sale, the museum is embarking on an ambitious public appeal for another \$40m. Larger space is expected to draw more people and revenue to the museum. In fact, the museum is counting on doubling its income, a goal comparable to the income doubling that occurred after the last expansion. There will also be a bond issue to help secure a new economic base for future operations.

Whether the controversy about the building affects people's support for the museum remains to be seen. The apartment tower is a clever means of bringing wealthy patrons into a new relationship to the museum, getting their money in return for a place to live. The claim that the new galleries will make a splendid foyer for the rich inhabitants of the building displays some of the hostility thus far engendered, raising questions of which clientele the museum is most anxious to secure. The museum might have used its "metes and bounds" powers to get the space it needed without building a tower, a possibility the museum dismisses as inadequate, though the tower itself is not remunerative enough and the museum considers "the expansion plan as an exciting incentive to contributors."

The Museum of Modern Art is an important institution that has given its imprimatur to not only daring contemporary artists but also to objects like typewriters, stereos and other modern gadgets now included in its collection. More than private developers and large corporations, it deserves to make money from New York zoning laws and everyone's desire to be squatting on the same space in the city. The sums must work out for a substantial benefit to the museum in justify the tower, since it is otherwise an expensive new gadget to add to its collection.



The new Museum Tower over the Museum of Modern Art, showing non-existent tower blocks on the right, from architect's model.

At present, the greatest amount of building in New York is going on in the middle of the city, from 53rd to 57th Street adjacent to Fifth Avenue. The area, which lies between Rockefeller Center and Central Park, has traditionally been the heart of the shopping district, with ground-level shops sitting under apartment or office buildings. The side streets of Fifth Avenue have had a surprisingly residential character, with numerous town houses, comparable in dimension if not antiquity to those in Mayfair. Even the apartment buildings rise no more than 10 or 15 storeys.

In this confined area, no more than half-a-mile square, four modern towers are under construction. Two will be corporate headquarters—for IBM and the American phone company—which will face each other along Madison Avenue between 55th and 57th Streets. The other two will be residential blocks, one adjacent to IBM, at 57th and Fifth Avenue. Built by a New York developer, the 60-storey structure requires the demolition of the Bonwit Teller store, a fashionable women's apparel shop housed in a fashionable building. The new structure will surround the Tiffany Jewellers' building, also a small square building with an elegant facade. Tiffany sold air rights over its own building to allow the new structure to grow to its grandiose proportions.

Though this new structure, with a shopping arcade and jagged-tooth design, has aroused objections for the massive presence it will create at that corner, the greatest controversy surrounds the other residential block, to be built as part of the expansion of the Museum of Modern Art, west of Fifth Avenue at 53rd Street. Unlike the telephone building, which has been controversial because of Philip Johnson's unexpected grandfather-clock-like pediment, lately designated as "fancy-dress historicism," the Museum Tower is a standard unimagined glass-sheathed structure. Sent because of the museum's public status, its building has been more open to public review and dissent.

If the museum has suffered from the public attention that private developers need not face, it has also benefited from special legislation that allows the

once standard statements meant to encourage building expire in about ten years. Furthermore, the museum was able to acquire a large parcel of land to the west of the existing structure through "metes and bounds" provisions in the new law, an innocuous term for condemning the property it did not have, which includes a small crafts museum and art book shops in brownstone town houses. It is already in the process of knocking down a beautiful neo-arts town house, previously used as a museum book shop and offices.

The new museum space will double the area of existing galleries with six floors below the apartment block. Unquestionably, the addition is needed for a museum that has room to display less than a quarter of its collection. The existing space will hardly be touched, except for some escalators being built in the gardens and, of course, the shadow of the new building, which will not begin to fall on the garden until after two o'clock," according to a defence of the new structure written by the museum.

The Museum of Modern Art is obviously anxious to see the new

shadows on the garden, the museum, in its legitimate concern to have a financially-secure future, has courted the disfavour of its neighbours and been distinguished in its own defence. The model of the new structure that has been widely circulated and used as the basis of debate over the building shows two towers on 54th Street that do not exist. There are town houses where the buildings are shown to be, an inaccuracy that hides the degree to which the new building will dwarf its surroundings.

The developer, a Chicago business firm, claimed the model was made by the museum architect while the general manager of the museum, Edward L. Saxe, assumed the model came from the developer's Chicago office. "The flats in the new structure will no doubt be some of the most expensive and luxurious in the city, boasting nine-foot ceilings, marble accessories and floor-to-ceiling window walls. The museum's memorandum in defence of the new building package claims that "to conserve energy, tinted glass will be used, and there will be only limited use of floor-to-ceiling windows." The museum general

Covent Garden

Peter Martins

by CLEMENT CRISP

Calcium Light Night is Peter Martins' first ballet. It is set to eight short pieces by Charles Ives, one of which—named after the calcium lamps used once by Yale fraternity men on nocturnal expeditions—gives the piece its title. I reported on it at the time of the New York City Ballet's Copenhagen season; seen again at the week's end, its succinct, atmospheric dances for Daniel Duell and Heather Watts lose nothing in impact. The language is terse, allusive, full of quirks that match Ives' style—Duell casually alert, quick off the physical mark; Watts precise in the angular, clear-edged solos that flash her marking out the limits of the dance area. Personality is hinted at in individual solos; brought together for the last two numbers, these admirable young dancers play unselfish and sparkly games with each other's bodies. The effect is of a personal creative voice—despite some inevitable Balanchinianism—and of a new and intriguing choreographic talent.

Throughout the NYCB season Peter Martins' dancing has been of Apollonian grandeur. His Danish schooling fits aptly in the company identity; the historical parallel with Christian Johannson's shaping of Petersburg dancers in the Bonnroville style in the latter half of the 19th century can also be seen today in the presence in the NYCB organisation of the great Danish teacher Stanley Williams—a presence which may well account for the élan shown in

the "Spring" quartet of Robbins' Four Seasons by four bright young male soloists.

Martins is a dancer of heroic stature, but his performance manner is light, in matter of ballon and elevation, and also, more significantly, in the fact that his physical presence is never opaque. The lift and clarity of torso as well as limbs give his interpretations what I can best describe as radiant ease in dynamics. In Racine or Diamonds, in Four Seasons haecchanal as in Donces of a Gathering, we see a classicism of the finest water: beautiful placing, impeccable finish (clear, tight fifth positions to complete tours en l'air, and in everything that harmonious modesty which is the mark of the true premier danseur classique.

Saturday night brought a chance to see Who Cares? Set to an assembly of Gershwin melodies, this should serve to remind us that Balanchine worked on Broadway in some of the finest musicals of a decade: On Your Toes; Robes in Arms; The Boys from Syracuse; Cabin in the Sky.

Who Cares? is an agreeable exercise for a chorus of what are always known as "Ladies and Gentlemen," who do rather what one might expect them to; the piece takes off into the higher realms of Balanchinian splendour through two stunning solos: Fascinati's Rhythm, in which Patricia McBride aboves an electrifying response to dance and music, and My one and only for Merrill Ashley, which is so difficult, and so sweetly danced,



Karin von Arolldingen and Sean Lavery in 'Emeralds'

that the eye is dazzled and delighted. Flawless coloratura dancers both.

In performances on Saturday there was much to make the heart rejoice. Heather Watts flashed through the Rubies section of Jewels with impish aplomb, Robert Weiss nipping in hot pursuit; Kyra Nicholls was like a young divinity with Sean Lavery in the Sanguinic duet from Four Temperaments (a ballet which has dominated

the repertory this season in magnificent execution); Suzanne Farrell and Peter Martins in Diamonds—required study, like the whole of Jewels, for anyone wishing to understand how music finds its sure companionship with dance—showed the unbroken Balanchinian chain of lucid style and aristocratic physical attitudes which takes us back nearly a century to NYCB's real roots in Imperial Petersburg.

Wigmore Hall

Fitzwilliam Quartet

by DOMINIC GILL

The Fitzwilliam began the last of their trio of recitals to introduce the new season at the Wigmore Hall last week with two novelties: a pair of unfinished movements by Mozart, completed by Duncan Druce, for strings and one or two clarinets. Both were well worth reviving (and finished by Mr. Druce without any evident seam)—the most fascinating and richly worked of the two a late F major Allegro (K580b) dating from the time of the three Prussian quartets of 1789-90, scored unusually for clarinet, bassoon horn and string trio, full of grave sweetness, dexterous tonal contrasts, and quicksilver counterpoint.

It was a tempting introduction, which the Fitzwilliam followed with their first performance in London of Britten's string quartet, almost everywhere—and considering the newness of the work to their repertory, that is a great deal—they caught its manner, and its measure, brilliantly well. The magical incantations of the second movement were beautifully gauged (though none of the three ensembles I have so far heard play it seems to dare set to give the magic its head, or its full weight of mystery). Christopher Rowland shaped the high-calling, violin solo of the

third movement very deftly; and the ghostly fairy-waltz of the second scherzo's trio was splendidly danced, free but firm. They kept firm, too, the difficult tread of the finale—"La Serenisima," but full of disquiet and regretful shadows. As the performance matures, and settles, it will surely gain in broadness and (the only important quality it yet lacks at some key points) in relaxation.

After the interval they were joined once more by Alan Hacker (the second clarinetist in the Mozart Allegro had been the excellent Leslie Schatzberger) for a clear, well-ordered, and at its best a warmly eloquent account of Brahms's clarinet quintet. Pressed hard, Hacker's tone would sometimes tend to toot and fizz uncomfortably at the edges (the timbre is memorable, and almost his trademark, but after in some works than others). In the central section of the second movement there were one or two moments distinctly more Peter Maxwell Davies than Zigeuner—stirring certainly, but disconcerting too, even as the agility of ensemble, and the smoothness and roundness of phrasing, were commanding. We caught an echo, as the quintet ended, of the last pages of the Britten—strange blend, intimate musical paradox, of troubled serenity.

'My Fair Lady'

returns to London

A new production of My Fair Lady will open at the Adelphi Theatre on Thursday, October 25. The show will star Tony Britton as Professor Higgins, Liz Robertson as Eliza Doolittle, Peter Bayliss as Alfred Doolittle, and Dame Anna Neagle as Mrs. Higgins.

There will be reduced priced previews from October 18. This production has just completed a six month tour of the provinces and its opening at the Adelphi will mark a special return for Dame Anna Neagle who starred there in Charlie Girl for 51 years.

Gorky's 'The Children of the Sun'

at the Aldwych

The Royal Shakespeare Company's British premiere production of Maxim Gorky's 'The Children of the Sun' opens at the Aldwych Theatre on October 9.

This is the fifth Gorky play to be presented by the RSC in recent years, and the fourth to be a British premiere. 'The Children of the Sun' was written while Gorky was in prison for his active part in the 1905 revolution.

Sinead Cusack, Carmen Du Sautoy, Alan Howard, Natasha Parry and Norman Rodway head the cast.

Young Vic Studio

Paradise is Closing Down

by B. A. YOUNG

Cape Town is the scene, the kitchen of Molly's cottage in a street that has lately moved up from coloured to white. (I mean "coloured" in the South African sense.) Molly (Naomi Buch) is Jewish, a first-generation South African, of English extraction whose husband has left her for a teenage girl.

As they prepare to go out to dinner she is chatting with Nurse (Helen Bourne), a student from what is still called Rhodesia, and Anna (Barbara Kinghorn), a fully-fledged Dutch South African. A young coloured man (Frank Williams) calls accidentally at the house and forgets his shopping bag when he leaves. "You might equate these four characters with the

dominant strands in South African society. "Most of the action is off-stage; Molly's flat is burgled, Anna's car is stolen. What is on stage is rather brisquely devised, with entries and exits made to fit the author's convenience rather than mere likelihood, and a good deal of irrelevant material brought in to keep things moving. But it is the talk that matters, not the action.

The author, Pieter-Dirk Uys, indicates sharply how these three women, from different but convergent backgrounds, are stepping blithely along the primrose path of a dalliance indifferent to the manifest signs of doom around them. "You've

been crying again." "It's just the tear-gas." The conversation is confined to the idiom of middle-class white society, though an occasional phrase shines out like a diamond in the digressing—"The good things in life without the payment in blood" exactly describes what these three are after. As in all the best political writing, the talk is as amusing as it is trenchant, and it is delivered convincingly, under Roberts Dorrant's direction, by the players of the Company of Four, all of them either native to or familiar with Southern Africa.

This is the kind of play I had in mind when I was driven to my outburst of impatience by

Brecht's Private Life of the Third Reich. Black persecution in South Africa is surely not so much less important to the world of the 1970s than Jewish persecution in Germany half a century ago.

Staff art exhibition

A display of art by National Gallery staff is on view to the public in the Board Room of the National Gallery until September 30.

This is the fourth public exhibition of paintings, drawings and sculpture by people who work at the Gallery.

TENNIS BY JOHN BARRETT

Italians wreck British hopes

BRITAIN'S DAVIS Cup dream for 1979 ended yesterday on the slow playing centre court at the Foro Italico, where Italy, leading two rubbers to one overnight, won the last two singles to complete a 4-1 victory.

In the 12 meetings between the two nations, Britain has won only three times—in 1922, 1928 and 1933, when British tennis reigned supreme. This is the eighth loss since the War, and in the previous three ties played in Italy, Britain had won only two rubbers.

serve in the sixth game and then for the first, and as it transpired, only time in the match broke the Italian's service as Panatta delivered a left-handed double fault and then was left stranded as Lloyd projected a winning back-hand lob.

This was about the only moment which the small but vociferous band of British supporters could cheer. Having recovered from 0-5 to 2-3 Lloyd could not prevent Panatta from holding his service in 15 with a searing service winner.

5-2 in the first set. The British team manager, Paul Hutchins, was philosophical afterwards about the thrashing suffered by the same team who last year carried Britain to the final of the Davis Cup for the first time since 1937.

He said "I would choose the same team again in the same circumstances if we were playing the match tomorrow. "We were playing the best clay-court nation in Europe, and they had to start as favourites. For the future I may have to consider some younger players who have proved their worth—men like Andrew Jarrett, Robin Beven, Jonathan Smith and Richard Lewis. But that is not to say that the present four are necessarily finished. It is too early to say."

Barazzutti and Tonino Zugarelli, as they were beaten 7-5, 10-8, 6-1. It was a nightmare of a match for all four players, and it was no surprise when afterwards Lloyd announced his retirement from future British teams.

More serious for Hutchins is the form and attitude of John Lloyd. Although I am sure he was trying, there was an apparent air of careless abandon about his play. Lately, there has been a welcome return of form, after almost 12 months without a win, but on clay courts his game is simply too dangerous and ambitious to succeed against world class players, except on rare days when everything is working to perfection.

SOCCER BY TREVOR BAILEY

Subtlety missing at the top level

AT WEMBLEY last Wednesday England reverted from their normal fluid 4-2-2 formation, favoured by many First Division clubs including Liverpool and Nottingham Forest, to a far from convincing 4-3-3. Although their 1-0 victory over Denmark, not one of the most powerful international sides, almost guarantees them a place in the European finals, it was an undistinguished match, enlivened by the brilliance of Keegan, who sparkled like a true diamond among a cluster of carefully-made imitations.

It was hard to imagine a forward line consisting of two basic wingers—the industrious Coppell on the right; and Barnes, still having difficulty in maximising upon his considerable individual skill, on the left; and the darting Keegan, who is liable to appear anywhere in the front line, a truly disciplined rearguard. McDermott, with the type of service he receives at Merseyside, but not against Denmark, could cause problem with his fast breaks, but Brooking nor Wilkins is likely to be among the goal-scoring this season.

A big weakness of Ron Greenwood's side was, with the exception of Keegan, the predictability. There is nothing wrong with a simple pass, but it does help to introduce occasionally the subtle one, which is far more likely to wrong-foot the opposition.

Exactly the same criticism can be levelled against most of our League clubs, some of whom are not seriously interested—the number is thankfully dropping—in mounting an attack until the ball is safely in the opponents' half. There is also a suspicion that many coaches lose the individual skill of a particular player in the effort to fit it into the team pattern.

On Saturday, Nottingham Forest, who in the last two years have established themselves alongside Liverpool as a great side, were shown to be playing so well, showing great enthusiasm. Norwich are in the process of building a new £1m stand and in terms of financial returns, this project prove a greater asset than any other.

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day, but seems to be much-needed on the pitch. The team that Bond has built for so very little on current prices inevitably is a shade short of class, though not up front, where the remarkable Fasbanu and the impressive Reeves were a more effective pair than Birtles and Woodcock. Both combine ability on the ground and in the air with pace and bravery. Their skill, persistence and effort forced many errors from what is regarded as one of the soundest defences in the land.

Reeves is already an England prospect, and if the tall and graceful Fasbanu continues to develop as quickly as he has done during the last 12 months, I fancy he could be an even more valuable asset, with his natural instinct to do the unexpected, plus his energy. The one problem which is bound to arise is how Norwich can keep this splendid pair of strikers with their rather disappointing backs. After all, both players must know they can collect five per cent of the enormous transfer fee which some wealthy club is bound to offer in the near future.

FINANCIAL TIMES

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Monday September 17 1979

BBC: licence and liberty

Mr. William Whitelaw, the Home Secretary, has two objectives as he puts the finishing touches to his plans for BBC financing. He is determined to move the corporation away from the poverty line and at the same time distance the Government, to some extent at least, from the political storms which are caused by frequent licence fee increases.

The BBC is moving deeper into debt on its present £25 colour licence fee. At the same time, it wants to maintain its editorial independence, but knows that its views on this subject are not shared by all members of the present Cabinet. Yet, on the whole, it has no doubts about its own wishes. It would like a long-term — perhaps five years or more — budget planned at 1980 prices, and funded by a licence fee firmly tied to some form of index.

The Home Office appears to have gone some way along the road towards accepting the theory, but has shied away from the practice. Mr. Whitelaw made it clear at the Royal Television Society conference in Cambridge over the weekend that his idea of long term is four years. The word 'indexation' is one that clearly does not feature in his vocabulary. Instead the BBC looks likely to have the four-year budget it wants, coupled with an undertaking that Government will increase the licence fee when it feels it necessary in order to deal with inflation.

The dilemma for Mr. Whitelaw has been that preventing the BBC from becoming a political football also involves the risk of removing the BBC from financial discipline. Apart from the inherent dangers of an indexed income for the corporation — others might seek a similar arrangement — the BBC unions might be tempted to use the chosen index as a benchmark for their own pay negotiations. By making an unspecified promise Mr. Whitelaw reserves to himself the right of turning to the public and saying: "It is not my fault the licence fee is

going up," while at the same time curbing his generosity if the BBC seems to be financially misbehaving. The BBC itself does not regard this as unfair. It is keen to negotiate a global amount with the Government and would resist intervention only if it was on specifics. To be told that it was getting £10m a year less would be acceptable, but to be told to cut out Radio Two would not. Unfortunately, the essence of the problem is how to retain financial control over the BBC while not affecting editorial independence. Mr. Whitelaw is a broadcasting enthusiast. He spent much more time at the Television Society's gathering than would have been required by a duty call. He has an affection for the business which has been seen in Postmasters General and Ministers of Posts and Telecommunications in the past, but rarely in Home Secretaries.

Delight This delight in broadcasting is not one that is shared by all of his Cabinet colleagues. The shadow of the broadcast interview with the Irish National Liberation Army still hangs over talks about BBC independence. The Whitelaw view that the BBC is a special case may not receive an entirely sympathetic hearing.

Whatever the final details of the Whitelaw scheme, the BBC must not be so insulated from the financial realities of the next few years as to be able to ignore them. We should all like to make long-term plans in the total confidence that the money would be available to fulfil them. It is a luxury, however, in which few can indulge. At the same time, the BBC must not be allowed to drift closer and closer to being just another recipient of an annual grant-in-aid, as it has done recently. Between the start of 1968 and the end of 1978 there were six licence-fee changes, usually as the result of the BBC taking the begging bowl along to assorted Ministers.

Mr. Whitelaw plan changes that, then it will have achieved a great deal. The Home Secretary is a vastly more powerful figure than previous Ministers responsible for broadcasting: Mr. Merlyn Rees, for example, delegated the whole area to Lord Harris. Thus the BBC is on its firmest ground for a long time in seeking a better working environment. At the moment, it looks as if the Government is moving towards the best solution for an extremely sensitive complex of problems.

Wage pressures in Italy

ONCE AGAIN there is talk of a "hot" Italian autumn. But a comparison with 1969 would be highly misleading. Unlike his uncles of 10 years ago, who centred on the private industrial sector, and which in retrospect marked the end of Italy's "economic miracle" of the '60s, the present disturbances are in the public sector. The planned peak came towards the end of last week with a total shutdown of the railways and of central and local Government offices throughout the country.

The ostensible grievance of the major confederated unions is the failure of the Government to index the pay of state employees according to the so-called sectoral mobile, enjoyed by their private sector counterparts.

Uncomfortable trial The strikes are an uncomfortable trial for the month-old administration of Sig. Francesco Cossiga, which is weak even by Italian standards. But its demise is unlikely until the major political parties have reached a compromise on a more stable formula (harder to find with every crisis) by which the country can be governed.

To meet the demands of the main unions would add nearly L3,500bn (£1.9bn) over the next three years to expenditure, at a time when the public sector deficit already stands at 15 per cent or more of GDP. It is fortunate that Italy's external finances remain in such remarkably good order. Moreover, in economic terms, the strike call appears to have little effect on the industrial sector. The unions are claiming that an improvement in employment conditions for public sector workers will be the first step towards an overhaul of the country's chronically inefficient bureaucracy.

Autonomous Left But the argument has been heard any number of times before with no resulting improvement in the service offered. The truth of the matter is that Italy's union movement is profoundly insecure of its role, and the constant threat of

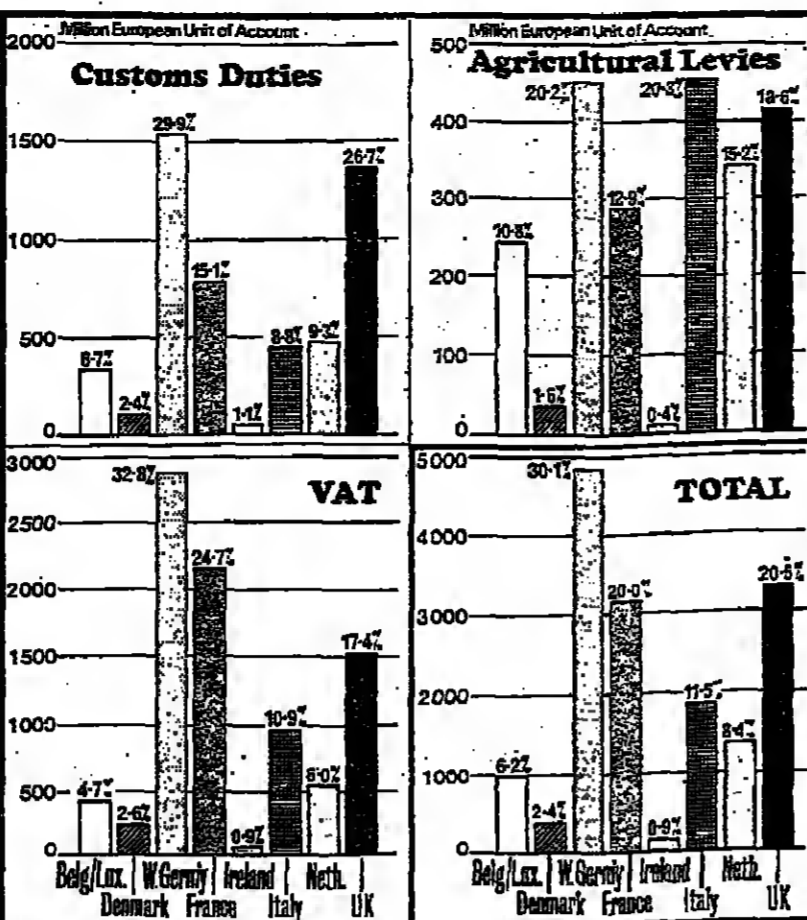
being outflanked by the so-called "autonomous" left, which corresponds to the militant fringe of British trade unionism. A succession of precarious Governments, and the association of the Communists with the ruling majority has pulled the unions much further into the political process than they are prepared for. And a more moderate stance, exactly as the Italian Communists found in political terms, has opened up a vacuum on the left into which the militants have naturally moved. The current unrest is therefore in large measure a calculated public display by the traditional unions that they still have teeth.

As for the public sector employees themselves, one might argue that the claim is in many respects preposterous. Not only do they have pension terms as attractive, if not more so, than workers in the private sector, but they are in effect unemployable. The consequence is that many (if not a majority) of them have second jobs, often more interesting and as remunerative as their supposed main occupation.

Scala mobile It is understandable that the Italian unions should want to have something to show for public service employees, after the advantages (still hard to quantify) won in the hard-fought negotiations for new three-year labour contracts for industrial workers concluded on the eve of the Summer holidays.

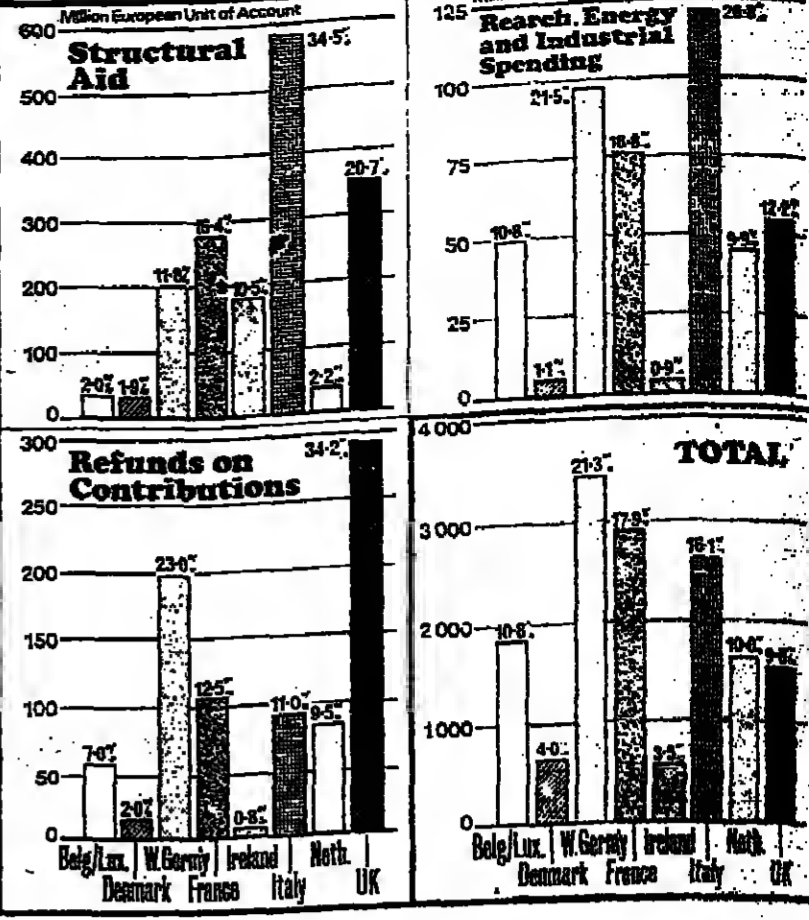
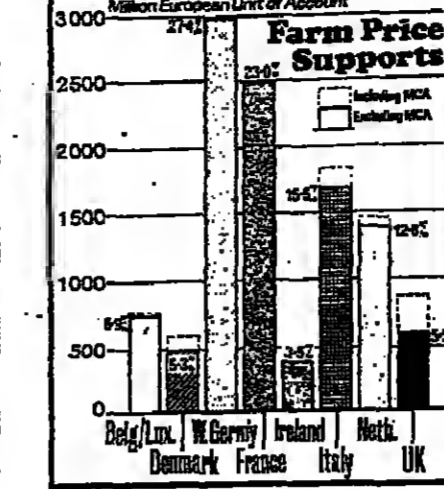
But it is certainly scarcely in Italy's interest to witness a further reinforcement of the scala mobile — which already makes control of inflation peculiarly difficult — especially at a moment when a growing weight of argument is in favour of reducing its scope by the exclusion of energy costs from the indexation calculations.

Were there an actual prospect of creating a full-time public administration, the price now being demanded would, of course, be small. But to eradicate the second job, pay for the first would presumably be less than to have a second job, and that is clearly not on the



GROSS BUDGET CONTRIBUTIONS

RECEIPTS FROM EEC BUDGET



Britain's share of the EEC budget

By GUY DE JONQUIERES and MARGARET VAN HATTEM in BRUSSELS

THE BRITISH Government returns to the offensive in Brussels today for what it hopes will be the start of the decisive phase in its latest battle to secure a better deal out of EEC membership. The campaign has been waged for almost a year, under both Conservative and Labour administrations, and if no clear outcome is yet in sight the Government can at least claim to have achieved some movement towards its objectives.

Hard struggle for UK

The report is the starting point for an intensive examination to be conducted by the EEC over the next three months of Britain's and Italy's complaints that the financial and economic odds of membership are stacked against them. It was set in motion last July at the urging of Mrs. Thatcher, the British Prime Minister, who persuaded other EEC leaders to agree to discuss "possible remedies at the next summit" in Dublin at the end of November.

NET CONTRIBUTIONS AND RECEIPTS —EEC BUDGETS 1979 AND 1980

Table with columns for Country, 1979 (A), 1979 (B), 1980 (A), 1980 (B). Rows include Belgium, Denmark, Germany, France, Ireland, Italy, Luxembourg, Netherlands, and UK.

Note: - indicates contributions; + indicates receipts. MCAs are attributed to importing countries in column (A) and to exporting countries in column (B).

The second, and more fundamental, reason is that the British economy has failed to adapt structurally to the rest of the Community as rapidly as had been hoped at the time of entry. Nor has the Community created on any large scale new common policies from which Britain could expect to benefit.

The problem of VAT

The UK stands to do little better under the VAT system, either, which in effect penalises it for its relative economic decline. One symptom of this is that a high proportion of Britain's CNP is accounted for by consumption, which is subject to VAT.

largely a subsidy to British consumers, cutting the cost of imported food. This has been effectively neutralised by the virtual elimination of Britain's MCAs in recent months. If sterling remains stable, it is estimated that the UK will receive less than 8 per cent of intervention spending next year, by the most generous calculation.

Controversial choices

The UK would rather put the onus for proposing a solution to its budget problem on the Commission, not least because the possible alternatives all involve politically controversial and in practice, difficult choices.

On the other side of the balance sheet the UK fares badly because it gains little benefit from the Common Agricultural Policy, which soaks up more than two thirds of EEC spending. In past years, there have been disagreements about exactly how much Britain gains from the CAP because of the sizeable sums paid out in monetary compensatory amounts (MCAs) used to bridge the gap between market exchange rates and the artificial "green" rates used in farm trade.

A third approach, and the one Britain appears to favour most, would be to adapt the system of budget contributions by devising a more effective financial mechanism. The Commission has already suggested that the EEC should link countries' contributions to their economic growth, so that payments by a wealthy country should rise in line with its prosperity, while poorer countries' contributions should not grow faster than their capacity to pay.

But the UK wants more than just a safeguard against future increases in its payments. It wants them cut. That would mean not only that the "own resources" system, painfully negotiated only three years ago, would have to be fundamentally revised, but that other countries would be required to step up their own contributions immediately to make up the shortfall. Few are likely to welcome such an obligation.

Until now, Mrs. Thatcher, to secure a budget solution, has banked heavily on her Government's claims to be using "European" than its predecessor. But if no real progress is made over the next three months, she may have to take a tougher line. Before she came to power, some of her advisers suggested that if its partners refused to yield, the UK might threaten not to pay its budget contributions. That remains the ultimate sanction.

But Britain has one other ace up its sleeve. The current arrangements are expected to reach their ceiling in 1981. The obvious way to increase them would be to raise the statutory limit on countries' VAT contributions above its current level of 1 per cent of the total. But Germany has already served warning that it is unwilling to do this and will insist instead on a reform of spending within existing revenues. That would lead to a major row in Brussels. Either way, the stage seems set for some tough negotiations in Brussels during the months ahead.

MEN AND MATTERS

Answering the call of the wild

If half London seemed, one way and another, pre-occupied with demonstrations yesterday, at least Hector Monro can put such things behind him for a few days. The Minister for all sorts (the Tory Denis Howell, in case you hadn't caught up) is off to Switzerland to sign a Council of Europe convention aimed at reconciling agriculture and environment.

Travels in exile

Well-nigh submerged by the flurry of revolutions and general upheavals that have taken place since, Chile remains a powerful rallying cry in Britain, especially on a sunny day. Yesterday saw the sixth demonstration marking the anniversary of the coup which toppled Salvador Allende, and once more his widow Hortensia — an attractive lady of 64 rather improbably cast as a revolutionary heroine — turned up to speak to the Chile solidarity campaigners, about 4,000 of whom marched to Trafalgar Square to listen to her. In the six years since the overthrow and death of her husband, she has travelled the world — she stayed before she had been in Holland, a few days before that, Havana, flying from one conference or demonstration to another.

Advertisement for 'The Music of the Mountains' featuring a picture of a mountain landscape and text about a concert.

Another platform

The Chile campaigners gathered round Nelson column. Michael Foot began to speak. I left to visit a demonstration taking place at a more unlikely venue — a new underground pedestrian precinct in the shadow of Waterloo Station. There, inconspicuously, stood the figure of Dr. Shapour Bakhtiar, the last Prime Minister of Iran under the Shah, addressing 7,000 of his fans living in London. It seemed an odd place to make what one of the rally organisers described as "his first public speech abroad as Prime Minister." It was, nonetheless, an emotional occasion for the man who disappeared from his office on the day the Tehran uprising reached its climax eight months ago.

On from kites

London businessman Fred Marsh goes off to China this week with hopes of discovering hot air balloonists and hang gliding enthusiasts. "They ought to be good at hang gliding," says Marsh, 54-year-old vice-chairman of the Royal Aero Club. "I'm told they use to send a man up on a kite when a ship was launched, to give it good luck."

Wishful thinking

Billed as "The 11th Multi-Choice Symposium," a trilingual conference in Amsterdam next month stretches the optimism of even the most ardent Thatcherite. One subject on the agenda is "The UK as a tax haven."

Large advertisement for Livingston, Scotland, featuring the headline 'WHY MAKE IT IN LIVINGSTON?' and text about industrial sites, factories, and government assistance.

Handwritten Arabic text at the bottom of the page.

FINANCIAL TIMES

Eurobond Quotations and Yields



THE ASSOCIATION OF INTERNATIONAL BOND DEALERS

At 31st AUGUST, 1979



The Association of International Bond Dealers (AIBD) compiles current market quotations and yields for Eurobond issues...

Apathy in markets

BY NICHOLAS COLCHESTER

It was during August that the new chairman of the Fed in Washington, Mr. Paul Volcker, made his presence felt. He succeeded Mr. William Miller on August 6 and on Tuesday August 14 the much anticipated tightening of U.S. monetary policy was indicated...

and the six month Euro-dollar rate went from a little over 11 per cent to 12 1/2 per cent. Although there was universal agreement that this was a move in the right direction in the U.S. Government's long struggle with inflation, it did little for the dollar sector of the international bond markets...

with an international perspective and with the dollar exchange rate risk to worry about. While the U.S. bond markets exhibited mild strength in the wake of Mr. Volcker's arrival, the Eurobond market turned a blind eye to this rally. It was almost universally agreed that the rise in interest rates needed to have bite as well as bark. The inflation figures out of the U.S. remained alarming and

were often cited as meaning that real interest rates in the U.S. were still negative, even though they might be approaching records in nominal terms. The figures for money supply and bank credit reinforced the impression that they were still not proving a deterrent. The impact of the rise in U.S. rates was also lessened by the relative rise in the interest rates of strong currencies like the Swiss franc and the D-Mark.

international bond market meanwhile started the month a level of popularity not seen since before the Carter package in defence of the dollar in November 1978. The strength in prices was not sustained throughout August, partly because the threat of mounting inflation continued to exercise the Bundesbank. But the tone remained firm and the issuing banks were able to price quite aggressively and to agree on a large monthly calendar of bond issues for the four weeks from August 21.

The yield of 7.21 per cent which Deutsche Bank established early in August on an eight year private placement for the World Bank was the lowest for four months. Yet at the end of August Bayerische Landesbank was able to float eight year D-Mark paper for Austria with a yield of 7.08 per cent. The Capital Markets sub-committee fixed a monthly volume of DM 750m, the largest since January and comparing with the DM 200m volume which had been set (but substantially exceeded) for the previous period.

Among the other hard currency alternative to the dollar the Dutch Guilder was noteworthy. Yields on medium term notes declined by 0.4 per cent over the month to around 8.5 per cent. This rate of return has become more attractive to investors now that the rate of inflation in the Netherlands has fallen below that in West Germany, where yields are still 1 1/2 per cent lower. Nor has the Guilder been under particular strain in the European Currency System.

CONTENTS GROUP HEADINGS PAGE US Dollars—Algeria II —Australia II —Austria II —Belgium II —Bolivia II —Brazil II US Dollars—Canada II —Columbia II —Denmark II —Finland II US Dollars—France II —Gabon II —Germany II —Greece II US Dollars—Hong Kong II —Hungary II —Iceland II —Iran II US Dollars—Ireland II —Israel II —Italy II —Jamaica II US Dollars—Japan II —Korea II —Luxembourg II

GROUP HEADINGS PAGE —Mexico III —Netherlands III US Dollars—New Zealand III —Norway III —Panama III —Papua III —Philippines III —Portugal III US Dollars—Singapore III —South Africa III —Spain III —Sweden III-IV US Dollars—Switzerland IV —Venezuela IV —United Kingdom IV —United States IV US Dollars—Multinational —Supranational IV US Dollars—Floating Rate IV-IV Austrian Dollars V Bahraini Dinars V Australian Shillings V Canadian Dollars V Eurodollars V Euro Composite Units V Euro Currency Units V Euro Units of Account V-VI French Francs VI Hong Kong Dollars VI Japanese Yen VI Kuwait Dinars VI Kroner (Denmark) VI Kroner (Norway) VI Luxembourg Francs VI Saudi Riyals VI Sterling/DM VI Australian Dollar/DM VI External Sterling Issues VI Special Drawing Rights VI Convertibles—France VI —Hong Kong VI —Japan VI —Luxembourg VI —Netherlands VI Convertibles—Singapore VI —S. Africa VI —Sweden VI —Switzerland VI —U.K. VI Convertibles—U.S. VI-VIII

The table of quotations and yields gives the latest rates available on 31st July 1979. This information is from reports from official and other sources which the Association of International Bond Dealers considers to be reliable, but adequate means of checking its accuracy are not available and the Association does not guarantee that the information it contains is accurate or complete.

All rates quoted are for indication purposes only and are not based on, nor are they intended to be used as a basis for, particular transactions. In quoting the rates the Association does not undertake that its members will trade in all the listed Eurobonds and the Association, its members and the Financial Times Limited do not accept any responsibility for errors in the table.

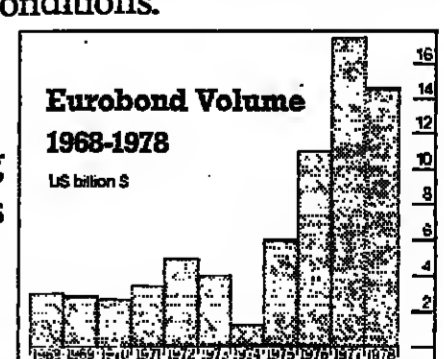
nevertheless the issuing house had no need of the time limit of six months which had been set for the note. CSFB was able to take the entire second tranche of \$200m off Citibank before the month was out.

Apathy on the part of investors towards 'straight dollar' bonds was complete and the new

COMPILED FOR THE ASSOCIATION OF INTERNATIONAL BOND DEALERS BY INTERBOND SERVICES LTD. A subsidiary of data STREAM International

Austrian Quotes Quotations and Yields of Austrian Eurobonds Table with columns: ISSUE, COUPON DATES, REPAYMENT, SINKING FUND (STARTING), PRICE (BID, ASKED), CURRENT YIELD, CURRENT YIELD TO MATURITY. Includes sections for D-MARK BONDS, U.S. BONDS, and DOMESTIC ISSUES.

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Market Maker in Austrian Eurobonds On international capital markets Austria ranks as Triple A. Shrewd investors prize Austrian securities as safe and attractive investments. Girozentrale Vienna On the Austrian capital market Girozentrale Vienna ranks with the leaders - it's the number one in Austria's largest banking group.

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Main financial table with columns for country, company name, price, and other financial metrics. Includes sections for US Dollars-Canada, US Dollars-Holland, and US Dollars-UK.

Continuation of the financial table, listing various international companies and their market data.

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Financial Times Monday September 17 1979

Main financial data table with multiple columns for various securities, including country, issuer, maturity, and price. It is organized into sections like 'US DOLLARS-JAPAN', 'US DOLLARS-GERMANY', etc.

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YAMAICHI logo and contact information for various international offices including New York, London, Frankfurt, and Zurich.

Creditanstalt-Market Makers in Austrian Schilling Bonds and International Bonds of Austrian Issuers.

Table listing bond offerings with columns for maturity, market price, yield to average life, current yield, and redemption details. Includes sections for 'Selected Austrian Schilling Bonds' and 'Selected International Bonds of Austrian Issuers'.

For current prices and further information please contact: For Austrian Schilling Bonds: Robert Jekl, Robert Wasinger... For International Bonds: Walter Vogl...



Creditanstalt Creditanstalt-Bankverein, Schottengasse 6, A-1010 Vienna.

Table with columns: IS DOLLARS-DENOMINATED (CONTINUED), SYMBOL, VALUE, PRICE, etc. Includes entries for 1979, 1980, and 1981.

Table with columns: US DOLLARS-DENOMINATED (CONTINUED), SYMBOL, VALUE, PRICE, etc. Includes entries for 1979, 1980, and 1981.

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Main table containing financial data for US Dollars - International (Continued), US Dollars - Floating Rate (Continued), and US Dollars - Floating Rate (Continued). It lists various financial instruments, their denominations, and associated rates.

Table containing financial data for Canadian Dollars (Continued), Canadian Dollars (Continued), and Eurodollars (Continued). It lists various financial instruments, their denominations, and associated rates.

Main table of financial data with multiple columns for various securities, including company names, prices, and yields.

Table of financial data, likely a continuation of the main table, listing various securities and their market values.

INVESTMENT FUNDS
The following funds include Eurobond issues within their portfolios
Quotations & Yields as at 31st August, 1979

Table listing investment funds from Societe Generale de Banque, including fund names, prices, and yields.

Publication dates for the AIBD supplement for the remainder of 1979 are:

October 15th
November 12th
December 10th
For details of advertising, contact: Alan Ogden on 01-248-8000 Ext. 389

Handwritten signature or mark at the bottom of the page.



WestLB Euro-Deutsche Markbond Quotations and Yields

Table with columns: Issue, Middle Price, Current Yield, Life, Yield to Maturity, and Repayment/mandatory drawing by lot at par sinking fund/P-purchase fund.

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WestLB SD-Certificates (Schuldschein-Index)

4 years maturity: 7.60% 5 years maturity: 7.70%

Table listing SD-Certificates with columns: Issue, Middle Price, Current Yield, Life, Yield to Maturity, and Repayment/mandatory drawing by lot at par sinking fund/P-purchase fund.

WestLB Euro-Deutsche Markbond Quotations and Yields

For current prices and further information call

Advertisement for WestLB, including contact information for Düsseldorf, London, and Luxembourg branches, and details for Westdeutsche Landesbank Girozentrale.

Nutshell Survey

... mixed turnover and uncertainty prevailed ... unchanged yield levels ... 6 new straight issues totalling 999 mio DM and 1 convertible of 60 mio DM were mostly well received ...

Table listing Nutshell Survey data with columns: Issue, Middle Price, Current Yield, Life, Yield to Maturity, and Repayment/mandatory drawing by lot at par sinking fund/P-purchase fund.

WestLB Euro-Deutsche Markbond Yield Index

August 31, 1979: 7.17% (July 31, 1979: 7.13%)

Table listing WestLB Euro-Deutsche Markbond Yield Index data with columns: Issue, Middle Price, Current Yield, Life, Yield to Maturity, and Repayment/mandatory drawing by lot at par sinking fund/P-purchase fund.

WestLB QUOTATIONS AND YIELDS

Life and Maturity appear in years and decimals of years and are in this context calculated as follows:

to final maturity in case of a lump-sum repayment

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# More at stake than a major strike

"THE STRIKE is a very delicate weapon. Sometimes a short, sharp strike is a good safety valve. But long strikes are of no use to union or nation. I will strive to reduce them."

"The action we will be recommending will be in excess of what we are meeting out now. We cannot discount a prolonged dispute."

Both comments come from Mr. Terry Duffy. The first was made on the day last year he was elected president of the Amalgamated Union of Engineering Workers, following a campaign in which he argued against unnecessary use of the strike weapon. The second came last month as he announced an increase in the most serious national industrial action to hit the engineering industry for many years.

## Two monoliths

Those who believe that the Left-right spectrum of a union's leadership has a simple correlation with levels of strike activity will be left wondering what is happening in the leading engineering union at a moment when it is—for the first time in decades—in the control of an all-moderate executive committee. Mr. Duffy is leading a strike the intensity of which Lord Scanlon, for years a frightening figure of the Left in the eyes of many engineering employers, never equalled. The reasons for the dispute, which risks bringing Britain's biggest industry and leading exporter to its knees, stem at least as much from chance as from a grand design.

There is little warmth in the relationship between the Engineering Employers Federation (EEF) and the Confederation of Shipbuilding and Engineering Unions (CSEU), the two monoliths of the industry. The annual negotiations on the national pay and conditions agreement provide a regular opportunity for each to

accuse the other of refusing to come to terms with the 30th century. But the match usually ends with the two teams pulling up the stumps and, instead of beating each other with them, declaring something approximating to a draw. One of the main reasons why the negotiations do not often lead to strikes or other action is the widespread belief—challenged by the events of recent weeks—that it is near-impossible to mount large-scale action about the national agreement when the real earnings of most engineering workers are determined at local factory and district level.

Against this familiar background the present round of negotiations opened, predictably enough, with sounds of growling as the unions declared the employers' initial offer "totally unacceptable." Even as subsequent meetings failed to reach agreement and Mr. Duffy warned that the two sides were "colliding head-on" there were many—including some of those around the negotiating table—willing to bet against there being a strike. And, indeed, there probably would not have been if Mr. Duffy and his fellow executive members had not started a defeat by only one vote at a meeting of the AUEW's policy-making National Committee recalled to consider the progress of the negotiations in June.

The employers had by that stage offered to increase the national minimum craft rate from £60 to £68 per week—with proportionate rises for other grades—in response to the union claim for £90. CSEU negotiators had indicated that the two sides were "colliding head-on" there were many—including some of those around the negotiating table—willing to bet against there being a strike. And, indeed, there probably would not have been if Mr. Duffy and his fellow executive members had not started a defeat by only one vote at a meeting of the AUEW's policy-making National Committee recalled to consider the progress of the negotiations in June.

## Working hours

This commitment of the new president meant that, unlike the position in many previous negotiations, the "working conditions" aspects of this year's engineering claim did not fade

away in the early stages of talks. And by the time Mr. Duffy came to report on the progress of negotiations to the National Committee's annual meeting in May he had elevated one aspect of the conditions demands—the need for a shorter working week—into a central principle. "Someone, somewhere, has got to take on the employing class on the shorter working week. We have got to have some battles on shorter hours," he declared.

It is not only because of Mr. Duffy's personal interest that the CSEU desperately needs to win on the hours issue. The fact that a minority of engineering workers have defied the strike call has diverted attention from a phenomenon which is at least as remarkable—the majority of workers are obeying strike instructions in spite of the fact that most earn more than the new minimum rates being sought, and stand to gain comparatively little in cash



TERRY DUFFY fulfilling principles

terms from the eventual settlement.

This does not necessarily signify passion for the cause—it could as easily be a tribute to basic trade union organisation and shop steward power. But, in view of the fact that the national agreement means comparatively little to many workers the question of whether the dispute was really worthwhile is going to loom large when it is over. If the action ends with the British engineering unions, having made a breakthrough on shorter working hours—something which is encountering the vigorous opposition of employers both nationally and internationally—it will be hailed as a victory of historic proportions. If not, the unions may have appeared to have got little more from industrial action than could have come from negotiations.

The EEF has dug in on the hours issue as firmly as the Confederation. A reduction to 39 hours would, it fears, simply lead to extra overtime and an increase in the industry's costs by 4 per cent or more. It has suggested a working party to consider shorter working time in the long term in the context of harmonising manual and white-collar workers' conditions, but this solution was on offer before the dispute began.

So while today's talks at the Advisory, Conciliation and Arbitration Service are a move towards reopening negotiations there is no guarantee that they will lead to an early settlement. This morning's talks have the limited purpose of seeing whether an agenda for negotiations can be agreed; if it can the two sides will meet again on Wednesday.

The EEF and the Confederation are both umbrella organisations with highly diverse memberships, spanning the biggest and smallest companies and unions in the industry. Both have energetic men at the head of their permanent organisations—Mr. Anthony Frodsham

by employers in any dispute. Justified or not, some engineering workers undoubtedly saw all this as an attempt by employers to shift the balance of advantage in their favour now that the Scanlon era was over and an avowed moderate was at the head of the AUEW.

## Hard-line EEF

Since the industrial action started, relations between the unions and employers have become quite bitter. At preliminary discussions in Manchester earlier this month they spent much of their time disagreeing about who had first called for the meeting. Union leaders are angry about what they believe are unrealistically hard-line attitudes on the EEF's part. At the Manchester meeting the employers said they were ready to make an improved offer but refused to unveil it until there was a return to normal working. The unions were then furious when Rolls-Royce decided to close down its aircraft engine operation completely and lay off all 30,000 manual workers, although the EEF says it has no policy of encouraging companies to close down because of the dispute.

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The EEF and the Confederation are both umbrella organisations with highly diverse memberships, spanning the biggest and smallest companies and unions in the industry. Both have energetic men at the head of their permanent organisations—Mr. Anthony Frodsham

at the EEF and Mr. Alex Ferry at the Confederation. But while the EEF's resources in both its Westminster headquarters and regional associations are extensive, the Confederation's central organisation is tiny. It operates from a small office next to what is in the process of becoming the new Labour Party headquarters in South London.

Although the Confederation encompasses the entire spectrum of manual and white-collar TUC unions in the engineering industry, on engineering matters the running is very much made by the AUEW. Many of the smaller Confederation unions are organisations with which the AUEW would like to amalgamate and this issue, as much as the disputes, will be on Mr. Duffy's mind this morning.

The conference of the AUEW's four sections meets in Eastbourne today—it was deferred from May amid wrangling about the future of the amalgamation between the Right-wing leaders of Mr. Duffy's engineering section and the Left-wing leadership of TASS, the white-collar section. For ten years now, internal differences have prevented the AUEW from bringing its four sections together into a complete amalgamation, but at last things could be moving.

The construction and foundry sections have agreed in principle to complete the amalgamation through a transfer of their members to the engineering section under the Trade Union (Amalgamation) Act. Even more significant, a special conference of the 75,000-strong National Union of Sheet Metal Workers will this week decide whether it should amalgamate with the AUEW. If this is agreed it will end ten years of stagnation—until now other unions have shown no enthusiasm for joining the AUEW

while the difficulties of the existing amalgamation remained unresolved.

For Mr. Duffy this morning—the future of the strike and the future of the amalgamation—could come together in an acutely personal way. Under his union's long and elaborate election procedures his campaign for re-election in the presidency gets under way next year—newcomers are allowed only three years in the job before being sent back to face the members.

If he can go back to them with the amalgamation difficulties on the road to resolution, and having achieved a breakthrough on the shorter working week as part of his campaign to abolish the distinction between manual and white-collar workers, it will be a credible prospectus. But if the strike goes wrong it is likely, when the details have been forgotten, to be Mr. Duffy who gets the blame rather than the anonymous National Committee delegate whose vote led to the defeat of the executive.

## Harsh reality

If this seems a little harsh, it represents a political reality of which Mr. Duffy is very aware. As he wrote elsewhere in his election address: "Our National Committee determines our union's policy; the president and other full-time officials carry out that policy. This is effective democracy in action and I pledge myself loyally to fulfil all obligations placed upon me."

No-one who has seen the robust and dedicated way in which the man who campaigned against strikes is leading this one could dispute that he is loyally fulfilling what is, in many ways, his union's highest principle.

## Post Office split

From the General Secretary, Council of Post Office Unions.

Sir—In an otherwise fair account of attitudes and problems arising from the Government's intention to split the Post Office, John Lloyd says of the industrial democracy experiment: "... it is an open secret that there has been disappointment on both sides."

If so, it has been kept from me, the unions' negotiator on this issue. Both Post Office and unions are reviewing the progress of the experiment with a view, the unions hope, to making a joint report to the Government. True, we understand that there are two views on the Board. There are not among the unions. We want the existing arrangements to continue beyond the present March deadline (for the Board itself) until the Post Office is reorganised in the light of the Government's intention to split thereafter, it would be for the two corporations to make their own arrangements.

The unions are satisfied that the industrial democracy experiment has been positive in its effect and that it has potential for the future. In the difficult phase the Post Office has now entered it is more than ever necessary that mutual confidence should be aimed for. Industrial democracy will assist in that.

A. Carter,  
11-12, Maiden Lane, WC2.

## Funded pensions

From Mr. A. G. Saunders and Mr. C. D. French.

Sir—Mr. Nottage suggests (September 10) that public sector pension schemes should switch from advance funding to pay-as-you-go in order to achieve an immediate reduction in current costs. In doing so he does not justice to either side of the equation. If we have six employees and two pensioners, the output from the six can probably support the pensions for the two on a pay-as-you-go basis. In due course the six will retire and be replaced. We will then have six employees supporting eight pensioners—a serious imbalance.

A pay-as-you-go scheme which promises pensions based on earnings revalued in line with the rate of inflation will face the same problem as a "funded" final salary based scheme—liabilities which have become onerous because of the effects of inflation. At least the funded scheme attempts to make some provision in advance to meet its commitments whereas members of the pay-as-you-go scheme can only hope that their children will be willing to provide them with their pensions.

Perhaps Mr. Nottage should be reminded that the State additional pension scheme promises pensions based on revalued earnings to be provided on a pay-as-you-go basis and that the ratio of UK pensioners in contributors is increasing. Very little foresight is needed to recognise the serious imbalance looming ahead.

Have we not visited enough "overheads" upon our children?

A. G. Saunders, C. D. French,  
39 Bath Street,  
Glasgow.

## Equal opportunities

From the Chairman, Equal Opportunities Commission.

Sir—Sue Cameron's article "Discriminating against women" in last Thursday's *Lombard* column rightly draws attention to the sex discrimination inherent in the criteria of the Government's proposed changes in immigration control. However, the Equal Opportunities Commission is distressed to see that it has been wrongly attributed with the statement "well-educated, white, middle-class women will be among those hardest hit."

The Commission has not said this. Our concern is for the rights and well-being of all British women, irrespective of race, colour, creed or social class. We do not wish to be represented as confining our attention to a select group alone, particularly in an area of such vital importance to all women and their families.

Baroness Lockwood,  
Chairman, Equal Opportunities Commission,  
Overseas House,  
Quay Street, Manchester.

## Channel tunnel

From Mr. George Behrend.

Sir—The answer to Mr. P. R. Easton's cri de coeur (Saturday last) for a solution to the country's transport problems including relieving airport congestion without creating an environmental problem is quite simple: it is called the Channel Tunnel.

The Tunnel should be built to Bernese European Gauge so that foreign trains can work into Britain and long distance transits taking weeks to Turkey or Iran would not be hampered by shortage of rolling stock as used in UK. Airports would be relieved of short haul flights altogether to Paris, Brussels, Amsterdam, etc. and those very airports, by no longer having to provide for flights to London, would have extra capacity for passengers from London to board for long distance flights. Since the British can work in the Common Market, no jobs would be lost by not having an extra airport in UK.

George Behrend,  
Villa Mon Contour, Flitquet,  
St. Martin, Jersey, CI.

## Company disclosure

From Mr. Tony Vernon-Horrcourt.

Sir—Your editorial yesterday (September 12) expressed uneasiness that the government proposed to reduce the disclosure requirements for certain categories of company, in particular, the green paper proposes some specific changes in thresholds immediately, prior to the introduction of any legislation.

The threshold for disclosure of turnover is to be raised from £250,000 to £1m. It is difficult to see that the requirement to disclose turnover is burdensome or that shareholders would benefit from this change.

The threshold for disclosure of directors' emoluments is to be raised from £15,000 to £40,000. This would severely restrict the information available to shareholders of mainly family companies who may well wish to be informed concerning the remuneration drawn by

## Dangers of indexation

From Mr. D. C. Beavers.

Sir—Can Samuel Brittan be serious about some of the things he advocates in his article "Time for cost of living safeguards" (September 13)?

Indexation of wages can create a number of problems as he rightly points out in the article but the most serious

## Letters to the Editor

cannot imagine and then to permit male British citizens to dwell in this country with a wife of any nationality, simply compounds the injustice.

If it is the Government's intention to exclude Asians from this country, then the legislation to be passed should be racist, and labelled such, not sexist.

Miss C. M. Waterhouse,  
34, Vaulgar Court,  
Southgate Road,  
Reading, Berks.

## The third airport

From Mr. S. Dorisdon.

Sir—Mr. B. Williams in his letter (September 12th), from an address comfortably distant from Stansted, makes the fundamental error of equating progress with modern technology. What is at stake is quality of life. In this instance for many thousands of residents of East Hertfordshire and West Essex. Stansted and the other sites under consideration are all situated in predominantly rural areas. The inhabitants of which have either chosen to remain in the rural environment into which they were born, or have migrated as a result of exercising their freedom of choice to select their own environment for work, family and recreation.

It is to their credit that "small vociferous groups" care sufficiently about the quality of their own and their neighbours' lives to take issue with the mighty bureaucratic machinery which, like Mr. Williams, sees progress in terms of converting green field and hedgerow into concrete jungle.

The least concern of those who live near the proposed sites is aircraft noise. What is of concern is the wholesale conversion of countryside into the urban and industrial areas that are an inevitable consequence of a major new airport.

It is not for local groups to take issue with the experts over the need for greater airport capacity, but it is for them to voice the expert view about the quality of life in their neighbourhood. The only viable solutions that ensure real progress—i.e. a better service to air travellers—and preservation of the countryside are (i) a spreading of the load throughout all the UK's existing airports (including Stansted) with fixed ceilings to the volume of traffic movements, or better (ii) reverting, at enormous financial but not human cost, to a constant site. Inland airports can be the antithesis of progress, Mr. Williams.

M. S. Davidson,  
The Bower,  
70 Birchanger Lane,  
Birchanger,  
Nr. Bishop's Cleeve, Herefs.

## Problem was not mentioned

Indexation provides increases like "manna from heaven." People start to believe (if they don't already) that wage increases do not have to come as a result of generating wealth. They just materialise in the pay packet as the index rises. Of course, wages have to move in line with inflation but agreements which tie increases directly to RPI or some other measure give company managers little opportunity to explore ways of generating the extra cash to fund it.

What if the index rises at an unforeseen rate? Well, Mr. Brittan suggests a re-opener clause for emergencies and these are defined by "the imperial tribunals and expert bodies." He says, "Has he seen some of the decisions which come from these bodies? Has he experienced the industrial relations chaos caused by this form of third party intervention?"

No, Mr. Brittan, indexation is not the answer and it could be worse than nothing at all.

D. C. Beavers,  
70 Widney Lane, Solihull,  
West Midlands.

## UK: Zimbabwe Rhodesia constitutional talks continue

UK: Zimbabwe Rhodesia constitutional talks continue, Lancaster House, London.

Executives of the Confederation of Shipbuilding and Engineering Unions and the Engineering Employers' Federation called to Advisory Conciliation and Arbitration Service to discuss engineering dispute—the two-day strike begins today and the national overtime ban remains in force.

Transport and General Workers' Union executive meeting throughout this week.

Amalgamated Union of Eng-

## Today's Events

Overseas: Meetings of European Economic Community finance and agricultural councils, Brussels.

M. Henri Simonet, Belgian Foreign Minister, meets Herr Helmut Schmidt, West German Chancellor, in Bonn.

Mr. John Nott, Secretary for Trade, contemplates visit to West Coast of U.S., Fiji, New Zealand and Australia.

OFFICIAL STATISTICS

Central Statistical Office issues Cyclical indicators for the UK economy (August).

COMPANY MEETINGS

See Week's Financial Diary on page 23.

These Notes having been sold, this announcement appears as a matter of record only.

New Issue September 1979

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## Unequal colour

From Miss C. M. Waterhouse.

Sir—As one of the "well educated, white, middle-class women" referred to in the *Financial Times* article on "Discriminating against women," I feel outraged that any Government should even consider curtailing my rights as a British citizen. Why it should be that potential EEC husbands are considered "more suitable partners than non-EEC men. I

## Company disclosure

From Mr. Tony Vernon-Horrcourt.

Sir—Your editorial yesterday (September 12) expressed uneasiness that the government proposed to reduce the disclosure requirements for certain categories of company, in particular, the green paper proposes some specific changes in thresholds immediately, prior to the introduction of any legislation.

The threshold for disclosure of turnover is to be raised from £250,000 to £1m. It is difficult to see that the requirement to disclose turnover is burdensome or that shareholders would benefit from this change.

The threshold for disclosure of directors' emoluments is to be raised from £15,000 to £40,000. This would severely restrict the information available to shareholders of mainly family companies who may well wish to be informed concerning the remuneration drawn by

# Laird Group ahead midway

TURNOVER OF the Laird Group rose sharply from £58.9m to £101.18m in the first six months of 1979 and pre-tax profits were higher at £5.04m compared with £4.33m in the same period last year.

The directors are effectively raising the interim dividend from 1.327p to 1.7p payable on December 3 and intend recommending total dividends this year of 3.4p. Last year's payment was an equivalent 2.71p on record pre-tax profits of £11.12m.

First half profits were struck before tax of £1.75m against £1.85m and an extraordinary item in the previous year of £350,000.

Referring to claims for compensation for the nationalisation of Scottish Aviation and the 50 per cent shareholding in Cammell Laird Shipbuilders which were submitted in March 1977, the directors say no acceptable offer has been made by the Government and both claims will therefore be the subject of arbitration proceedings.

So far, payments received on account amount to £2.5m.

## BOARD MEETINGS

TODAY	
Interim—A. and C. Black, Black and Edgington, Huxley, Federal Land and Building, J. B. Holdings, Low and Bonar, Ransomes, Sims and Jeffries, Biron Engineering, Henry Sykes, United Rescues.	
FUTURE DATES	
Interim—	
Amey	Sept. 24
Copple	Sept. 24
Dunlop	Sept. 27
Gen. and Concl. Invest. Trust	Sept. 27
Gibbs (Anony)	Sept. 18
Harris Queensway	Oct. 3
Jourdan (Thames)	Sept. 21
Leadenhall Sterling	Sept. 20
Sedgwick Farley Bland Payne	Sept. 20
Senior Engineering	Oct. 6
Tronoh Mines	Sept. 20
Wednes	Sept. 20
Westport Investment Trust	Oct. 17
Final—	
Mills and Allen International	Sept. 15

## Support for Spillers' management

SPILLERS' three non-executive directors yesterday voiced their support for the company's existing management.

Mr. P. G. Best, Mr. P. J. Elton and Mr. G. A. Whitaker, said they had been concerned about statements regarding the competence of Spillers' management to achieve improved results in the future.

"We wish to make it clear that we have been fully involved in the planning for the future of Spillers and in reaching the decisions for the future growth of the company."

"This Board, under the chairmanship of Michael Veroon, is a constructive and well organised Board which speaks freely and takes action."

"Since we joined the Board we have become increasingly impressed with the very real opportunity for profit growth and with the executive directors' and management's determination and ability to take all steps necessary to achieve this. We shall do all we can to ensure that whatever steps may be necessary are taken."

## BERWICK TIMPO BATTLE

# Toymaker's fate in the balance

BY ARNOLD KRANSDORF

Shareholders of Berwick Timpo, the embattled toy manufacturer engaged in a bitter Boardroom struggle, have until Wednesday to decide the company's future management structure.

They are being asked to choose between a Board led by Mr. John Oakley, 53, chairman for the past nine years, or one which will include Mr. Torquill Norman, 45, chief executive for eight years before resigning in May.

The issue comes to a head at an extraordinary meeting on Wednesday after more than six weeks of acrimonious exchanges, which have included pledges of resignation by four directors if the Board changes are approved. Resolutions, backed by Mr. Norman, call for the removal of Mr. Oakley and two other directors, Mr. J. A. C. Hill and Mr. J. A. Scott, and the appointment to the Board of Mr. Norman and Mr. J. M. C. Andrews.

## Over 40% claimed

The former chief executive says he has firm shareholder backing from holders of 37.6 per cent of the company's equity. Up until the end of last week, additional proxies had lifted this figure to "significantly above 40 per cent," he claims.

According to Mr. Norman there are institutional shareholders controlling some 28 per cent of the capital who have not yet taken a firm decision.

Both sides say they have had a "good response" from the undecided institutions, with Mr. Oakley claiming that "most" of the group's major shareholders other than those committed to Mr. Norman have indicated their support for the board.

A simple majority will win the day so an important factor will be the level of shareholder response to the resolutions. Mr. Oakley needs a high turnout but in view of Mr. Norman's head start, traditional shareholder apathy could put him and several other directors, out on the street.

If Mr. Norman loses, no changes are expected on the present board.

If Mr. Norman wins he faces the prospect of mass resignations from the remainder of the board. The finance director and managing directors of three key subsidiaries have pledged not to work for Berwick Timpo under the stewardship of their previous colleague.

Mr. Norman has called on them to reconsider their positions but has said: "If not, we have people in mind within the subsidiaries, and one or two people from outside."

The three managing directors have said that the implications of their resignations would be "staggering." It would take a long time for the company to pull back to the position it is in now," they say.

But Mr. Norman is "confident that the subsidiaries will operate effectively until replacements are found."

While the protagonists disagree on the consequences of Wednesday's vote, they have, at least, occurred on the origins of the dispute: it was the refusal of Mr. Oakley to support Mr. Norman's proposals for improving the supervision and management of two loss-making companies, Model Toys and Fair Toys, that caused the policy disagreement leading to Mr. Norman's resignation and his subsequent proposals for restructuring the board.

## Avoiding publicity

After taking advice from Hill Samuel, the company's merchant bank and Rowe and Pitman, the company's brokers, Mr. Norman says he was left in no doubt that he should do everything possible to avoid a public row over the policy disagreement.

By withdrawing from the board, he felt he could talk privately and gain the support of major shareholders, and then persuade the board to accept his proposals.

# Brokers argue against early drop in MLR

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

MINIMUM LENDING Rate should not yet be reduced from 14 per cent, says stockbroker and leading monetary commentator W. Greenwell.

In the latest monetary bulletin published this morning the firm says the behaviour of the broader monetary aggregates over the past two months is "reasonably encouraging, bearing in mind that there is a lag before a rise in interest rates has its full effect on them."

"But the evidence that monetary growth is becoming satisfactory is very fragile; it is certainly insufficient for the authorities to reduce MLR."

Similarly, Buckmaster and Moore—for whom Mr. Geoffrey Wood of the City University is a consultant—argues that monetary policy is not excessively tight.

The growth of bank acceptances, or commercial bills, held outside the banking system and not included in the main statistics, means that the published figures for sterling M3, the broadly defined money supply, understate the true rate of growth by between 2 and 4 per cent.

Both brokers also join in the growing debate about the right policies for the coming recession; both reject suggestions that fiscal policy or monetary targets should be relaxed.

Buckmaster and Moore argues that the monetary target should be reduced slightly next April, and public sector borrowing could also continue to be reduced gradually. If the economy is supported by a firm floor to money growth—if necessary by purchases of gilt-edged stock by the Government—Brokers—such a combination of policies would produce steadily falling inflation without a sharp fall in employment.

Greenwell suggests that inadequate monetary growth could be a danger next year, though it is not at present. The authorities should act to stop the money supply from falling below the gradualist path of a steady long-term reduction (for example, by rationing sales of gilt-edged stock).

The brokers reject the view that the target range for the money supply should be raised. "Further, in no way does the coming recession reduce the need for cuts in public expenditure."

## Problems for marine insurance

Financial Times Reporter

THE ANNUAL CONFERENCE of the International Union of Marine Underwriters starts in Edinburgh today with marine underwriters in the midst of one of the most unprofitable and worrying periods on record. The conference, involving 510 underwriters from 42 countries, was last held in the UK ten years ago.

One major issue could well be overcapacity, which is perhaps the highest single problem in the marine insurance business, particularly for the major markets such as London.

Under the three-year accounting system to allow for the traditional long-tail claims nature of the business, 1976 was the last year to show profits. Since then the trend has turned decidedly sour, and many insurers think that 1979 could produce catastrophic underwriting results.

The cargo market is affected by rates which are considered too low.

A major factor this year is the alarming jump in the shipping casualty graph, especially in the summer months, with a string of big tanker losses.

## Television rental trade 'moving into growth era'

BY JOHN LLOYD

THE TELEVISION rental industry is now moving into a "totally new era of growth," according to a report from stockbrokers Laurie Millbank.

Rental of colour TV's—the companies' main business—has declined from 76 per cent of the consumers' market in the early 1970s to 65 per cent now.

At the same time, the main impact on profitability of the industry of depreciation on sets introduced in the early seventies is being felt.

However, the report believes that the new TV-related products—video cassette recorders, video long playing discs and videodata systems—will "fulfill growth expectations."

The effect of the rental of new products on profits is expected to materialise in the late 1980s. "Although the arguments in favour of renting colour television sets are compelling as in the early 1970s, we believe that users of the new products will prefer to rent these systems."

"This is for exactly the same reasons that early users of colour TVs preferred to rent, namely that the reliability of the products is not yet established, the cost of purchase is still falling and the technology is still developing."

### LOCAL AUTHORITY BOND TABLE

Authority (telephone number in parentheses)	Annual Interest %	gross pay-able	Minimum sum	Life of bond	Year
Barnsley (0226 203232)	12	year	250	3-5	
Barnsley (0226 203232)	12	year	250	5-10	
Burnley (0282 25011)	12	year	500	5-7	
Kirkcaldy (0484 22133)	12	year	500	1	
Kirkcaldy (0484 22133)	12	year	500	2	
Knowsley (051 548 6555)	11	year	1,000	1	
Knowsley (051 548 6555)	12	year	1,000	5-7	
Redbridge (01-478 3020)	11	year	200	4-6	
Redbridge (01-478 3020)	12	year	200	6-7	

### FINANCE FOR INDUSTRY TERM DEPOSITS

Deposits of £1,000-£50,000 accepted for fixed terms of 3-10 years. Interest paid gross, half-yearly. Rates for deposits received not later than 28.2.79.

Terms (years)	3	4	5	6	7	8	9	10
Interest %	12	12	12	12	12	12	12	12

Deposits to and further information from The Chief Cashier, Finance for Industry Limited, 91, Waterloo Road, London SE1 8XP (01-828 7822, Ext. 367). Cheques payable to "Bank of England, a/c FFI" FFI is the holding company for ICFC and FCI.

### PERSONALISED GOLF BALLS

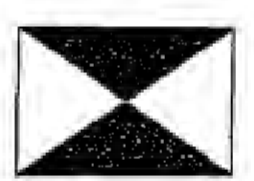
By DUNLOP, TITLEIST, PENFOLD with YOUR OWN OR CO. NAME PRINTED FREE!

Ideal as commercial incentives or Christmas gifts. From 24.95 per dozen. Minimum order 12 dozen. Discounts on larger orders.

**YORKSHIRE GOLF CENTRE**  
8-10, MANCHESTER ROAD, GEEPCAR, SHEFFIELD, S7 4JZ. 0742 896021. Evenings and Weekends Phone 0695 72680.

### The Nippon Credit Bank, Ltd.

Negotiable Floating Rate U.S. Dollar Certificates of Deposit  
Maturity date: 17 March, 1981



In accordance with the provisions of the Certificates of Deposit notice is hereby given that for the six month interest period from 17 September 1979 to 17 March 1980 the Certificates will carry an interest rate of 13 1/2% per annum.

Agent Bank  
The Chase Manhattan Bank, N.A., London

### AVANA GROUP LIMITED

The Annual General Meeting was held on 14th September, 1979 and the accounts for the 52 weeks ended 31st March, 1979, were adopted.

	1978/79	1977/78
Turnover	£33,399,000	£29,612,000
Group Trading Profit	£ 2,252,051	£ 3,170,737
Group Net Profit before Tax	£ 3,518,424	£ 2,940,401
Group Net Profit after Tax	£ 2,233,433	£ 1,194,365
Capital Employed	£11,788,184	£ 9,340,711
Group Fixed Assets (less Depreciation)	£ 6,598,656	£ 5,384,594

In his Statement the Chairman said:—  
"Trading conditions in the light of the oil supply problems and likely world recession will not be easy but subject to unforeseen circumstances, I have no reason to doubt that the good start will be maintained and produce a further year of growth."  
JULIAN HODGE, CHAIRMAN

A copy of the Company's accounts may be obtained by writing to The Secretary, Avana Buildings, Cardiff CF1 7YH.

# The Republic of Ecuador

## \$100,000,000

### Ten Year Loan

Managed By

Loeb Rhoades Shearson International Limited  
First Chicago Panama S.A.

International Mexican Bank Limited  
Midland Bank Limited

—INTERMEX—

The Mitsui Trust and Banking Company, Limited  
The Sumitomo Bank, Limited

The Yasuda Trust & Banking Company, Limited

Provided By

The First National Bank of Chicago  
International Mexican Bank Limited  
Midland Bank Limited

—INTERMEX—

The Mitsui Trust and Banking Company, Limited  
The Sumitomo Bank, Limited

The Yasuda Trust & Banking Company, Limited

Bank of British Columbia  
Bank of Montreal International Limited

Bank of Tokyo and Detroit (International) Limited

Dai-ichi Kangyo Bank Nederland N.V.  
Dai-ichi Kangyo Bank (Schweiz) A.G.

Irving Trust Company  
Mellon Bank N.A.

Midland Bank France S.A.  
Midland Bank Trust Corporation (Jersey) Limited

Mitsubishi Bank (Europe) S.A.  
Nippon European Bank S.A.

The Royal Bank of Canada International Limited  
The Saitama Bank, Ltd.

The Taiyo Kobe Bank, Limited  
The Tokai Bank, Limited

UBAF Arab American Bank  
U.B.A.E.—Union de Banques Arabes et Europeennes S.A.

Union Trust Company of Maryland

Agent Bank  
International Mexican Bank Limited  
—INTERMEX—

July 1979

### SIMCO MONEY FUNDS

System Investment Management Co. Ltd.  
60, CANONS STREET, LONDON, W.1  
Telephone 01-263 4122

Rates paid W/E Sept. 16th, 1979

	Call	7-day
Mon.	13.571	14.051
Tues.	13.694	14.051
Wed.	13.741	14.058
Thurs.	13.808	14.030
Fri./Sun.	13.878	14.044

### The Kingdom of Thailand

U.S. \$30,000,000

Floating Rate Notes 1984

In accordance with the provisions of the Notes notice is hereby given that the Rate of Interest for the 6 month Interest Period has been fixed at 13 1/2% per annum. The Coupon Amount of U.S. \$65.68 will be payable on 17th March, 1980 against surrender of Coupon No. 2.

17th September, 1979  
Manufacturers  
Hanover Limited  
Agent Bank

THE BANK OF YOKOHAMA, LTD. LONDON

Negotiable Floating Rate U.S. Dollar Certificates of Deposit maturing 15 March 1980

In accordance with the provisions of the Certificates of Deposit, notice is hereby given that for the interest period from 15 September 1979 to 15 March 1980 the Certificates will carry an interest rate of 13 1/2% per annum.

Agent Bank  
17 Sept. 1979  
First Chicago Ltd.

# THE LAIRD GROUP LIMITED

## Interim Results 1979

(subject to audit)

	Half Year to 30 June 1979 £'000	Half Year to 30 June 1978 £'000	Year 1978 £'000
Turnover	101,176	68,997	150,979
Profit before Tax	5,043	4,825	11,116
Tax	(1,750)	(1,850)	(4,082)
Profit after Tax	3,293	2,975	7,024
Extraordinary item	—	(350)	(690)
Profit available for Ordinary Stockholders	3,293	2,625	6,334
Dividend	(823)	(638)	(1,303)
Retained Profit	2,470	1,987	5,031

### Notes

- An interim dividend of 1.7p net per Ordinary Stock Unit (1978 1.327p net) will be paid on 3 December 1979. It is intended to recommend a total dividend for 1979 of 3.4p net (1978 2.71p net). The comparative figures for 1978 have been adjusted for the capitalisation issue made earlier this year.
- The tax charge includes £1.4 million of overseas tax (1978 £1.5 million).
- Claims for compensation for the nationalisation of Scottish Aviation and the 50% shareholding in Cammell Laird Shipbuilders were submitted in March 1977.

No acceptable offer has been made by the Government and both claims will therefore be the subject of arbitration proceedings. So far, the payments received on account amount to only £2.5 million.

مكتبة الأناضول

INTNL. COMPANIES and FINANCE

PENDING DIVS.

RECENT ISSUES

Interest rates help Ennia

By Our Amsterdam Correspondent
ENNIA, the Dutch insurer, saw its first-half net profits jump by 32 per cent to Fl 29.2m (\$14.7m) from Fl 22m in the same half of last year.

Second half improvement expected for Hagemeyer

By MICHAEL VAN OS IN AMSTERDAM
HAGEMEYER, the Dutch trading group, has sustained a net loss of Fl 6.9m (\$3.47m) in the first half of this year.

For the convenience of readers the dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table.

Table with columns: Company Name, Dividend Type, Amount, Date, Announcement Date. Includes companies like Amstel, BSA, and various international firms.

EQUITIES

Table of recent issues with columns: Issue Price, Date, Stock Name, Price, Change, etc.

FIXED INTEREST STOCKS

Table of fixed interest stocks with columns: Issue Price, Date, Stock Name, Price, Change, etc.

"RIGHTS" OFFERS

Table of rights offers with columns: Issue Price, Date, Stock Name, Price, Change, etc.

TV venture by Amex, Warner

NEW YORK - American Express (Amex) and Warner Communications have agreed in principle to engage jointly in the cable TV business.

Kaufhof sales drive pays off

By GUY HAWYIN IN FRANKFURT
KAUFHOF, West Germany's second largest store group, is marking the 100th anniversary of its founding with a major sales effort.

BASE LENDING RATES

Table of base lending rates for various banks and currencies, including A.B.N. Bank, Hill Samuel, etc.

Basco in liquidation

By MARY FRINGS IN BAHRAIN
THE SAHRAHIN fishing company (Basco) which was established in 1967, is to go into voluntary liquidation.

Western Auto

Beneficial Corporation, the consumer credit group, announced its Western Auto Supply subsidiary closed 116 company-owned retail stores last week.

CURRENCIES, MONEY and GOLD

D-mark rise hits sterling

By COLIN MILLHAM
On Friday sterling fell below \$2.20 for the first time since July 10, and closed at \$2.1665, the weakest level since the end of June.

Table of gold prices and other market data, including Gold Bullion (fine ounces) and other currencies.

THE DOLLAR SPOT AND FORWARD

Table of dollar spot and forward rates for various countries and currencies.

THE POUND SPOT AND FORWARD

Table of pound spot and forward rates for various countries and currencies.

EXCHANGE CROSS RATES

Table of exchange cross rates for various currencies including Pound Sterling, U.S. Dollar, etc.

LONDON MONEY RATES

Table of London money rates for various currencies and financial instruments.

CURRENCY RATES

Table of currency rates for various countries and currencies.

Public Works Loan Board rates

Table of Public Works Loan Board rates, effective from September 8, showing interest rates for different terms.

Thomas Tilling Limited advertisement featuring 'To Future Generations, Security' and 'Interim Report 1979'. Includes a large image of a traditional Japanese building and detailed financial data.

Anglo American Coal Corporation Limited advertisement, 'COAL SUPPLY TO THE ELECTRICITY SUPPLY COMMISSION'. Includes details about coal supply and contact information.

INSURANCE

Legal expenses risks should be covered

BY OUR INSURANCE CORRESPONDENT

LEGAL EXPENSES insurance—the provision of cover for the cost of going to court—continues very much to be the Cinderella of the British insurance market. Until recently only two organisations offered cover: DAS Legal Expenses Insurance of Bristol, partly owned by Phoenix Assurance, and Stover, brokers at Colchester, whose policies are underwritten at Lloyd's.

More insurers

Sometime soon the report of the Royal Commission on Legal Services will be published and part of that report will deal with the question of how best to enable the citizen to get the legal help and advice he needs. It could be provided by improvement of State sector finance (which in real terms continues to diminish) by expansion of private sector insurance, or by some mixture of both.

But whatever the Royal Commission may have to recommend in the public sector, however cogently the arguments are put, we must assume that in the next couple of years or so extra public money will just not be made available.

So unless the Royal Commission comes down heavily against the provision of legal expenses insurance, the time is surely right for more insurers to enter the British market. They need to compete for the relatively small amount of business already written, which can only lead to a cut-throat and unprofitable, but they should positively and substantially increase the number of policyholders, both private and commercial, by making the public generally aware of the protection that is available.

In other words, demand has to be created—and I doubt whether this can be done by just the two specialist organisations now operating here even with the assistance of Economic Insurance.

APPOINTMENTS

New chief for Carters Seeds

Mr. John Harwood has been appointed managing director of CARTERS TESTED SEEDS, Llangollen, North Wales. He joined Carters from his sister company, R. and G. Cuthbert Hardware, where he was sales director and also managing director of the Johnson Gibbons wholesaling company at Stevenage, Herts. Mr. Harwood is also managing director of the Horticultural and Botanical Association, the holding company for Carters, Cuthbert and Dobies Seeds. Carters Tested Seeds is a British seed subsidiary of the chemical, industrial and consumer goods corporation, Kemnol, whose headquarters are in Sweden.

Mr. D. R. Stone has succeeded Mr. R. S. Millett as managing director of WILLETTE INDUSTRIES, and Mr. J. W. Runcars has been made a director. Mr. G. B. Douthwaite and Mr. J. V. Symons have been made directors of GILLETTE UK.

The BRITISH PAPER AND BOARD INDUSTRY FEDERATION has appointed Mr. C. F. Robinson as secretary. He succeeds Mr. K. Harvey, former secretary of the PAPER AND BOARD INDUSTRY ASSOCIATION. Other officers elected for the coming year were: senior vice-president Mr. Mike Stockman, junior vice-president Mr. John Tandy, secretary Dr. Tony Gibson, Weybridge, Surrey, and honorary treasurer Mr. Peter Clarke, Uckfield, Sussex.

Mr. Jonathan H. Davies has joined the Board of ATED BRITISH ENGINEERING. One of the youngest NATIONAL FREIGHT CORPORATION directors, 32-year-old Mr. Alan Jones, takes over as regional director of Roadline's London Region, on September 24. Previously he was

WORLD STOCK MARKETS

Indices

NEW YORK—DOW JONES

Table with columns for Date, High, Low, and Change. Includes data for Industrial, Transport, Utilities, and Trading Vol.

Table with columns for Date, High, Low, and Change. Includes data for Ind. div. yield % and P/E Ratio.

Table with columns for Date, High, Low, and Change. Includes data for Standard and Poors and Composite.

Table with columns for Date, High, Low, and Change. Includes data for Ind. div. yield % and P/E Ratio.

EUROPE

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Amsterdam and Brussels/Luxembourg.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Copenhagen and Vienna.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Germany and Milan.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Paris and Stockholm.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Zurich and Australia.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for New Zealand and Hong Kong.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Singapore and Tokyo.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Seoul and Taipei.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Manila and Jakarta.

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Table with columns for Date, Price, Div. Yield, and Change. Includes data for Singapore and Hong Kong.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Seoul and Taipei.

Table with columns for Date, Price, Div. Yield, and Change. Includes data for Manila and Jakarta.

Table with columns for Date, High, Low, and Change. Includes data for N.Y.S.E. All Common and Montreal.

Table with columns for Date, High, Low, and Change. Includes data for Toronto Composite and Johannesburg.

Table with columns for Date, High, Low, and Change. Includes data for Australia, Belgium, and Denmark.

Table with columns for Date, High, Low, and Change. Includes data for France, Germany, and Holland.

Table with columns for Date, High, Low, and Change. Includes data for Hong Kong, Italy, and Japan.

Table with columns for Date, High, Low, and Change. Includes data for Singapore, India, and Pakistan.

Table with columns for Date, High, Low, and Change. Includes data for Sri Lanka, Thailand, and Malaysia.

Table with columns for Date, High, Low, and Change. Includes data for Philippines, Indonesia, and Brunei.

Table with columns for Date, High, Low, and Change. Includes data for Singapore and Hong Kong.

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Table with columns for Date, High, Low, and Change. Includes data for Seoul and Taipei.

WALL STREET

NEW YORK

Large table listing various stocks and their prices, including companies like Johnson & Johnson, IBM, and General Electric.

Legal expenses

Take the domestic sector: any company contemplating a mail drop on its motor or household policyholders starts from the disadvantage that most probably it will be asking each for more premium at this renewal than was collected last year, certainly in inflationary terms, and perhaps in real terms as well.

Maybe we are all resigned to such increases, and bear them philosophically but I guess that only a few will want to dig deeper into their pockets to find more premium for the optional extra of legal expenses cover, however much we might really need it some time in the next five years, if not immediately.

We are back to the problem, how can insurers create demand? Perhaps the expected Royal Commission report will give the market, and the insuring public the stimulus it needs.

Table with columns for Date, High, Low, and Change. Includes data for various international markets.

Table with columns for Date, High, Low, and Change. Includes data for various international markets.

Table with columns for Date, High, Low, and Change. Includes data for various international markets.

Table with columns for Date, High, Low, and Change. Includes data for various international markets.

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**ROYAL DUTCH PETROLEUM COMPANY**  
(N.V. Koninklijke Nederlandse Petroleum Maatschappij)  
Established at The Hague, The Netherlands

**INTERIM DIVIDEND 1979**

The Supervisory Board and the Board of Management of the Company have declared on account of the expected total dividend in respect of the year 1979, an interim dividend amounting to Netherlands Guilders 5.50 per share on its outstanding shares of 20 guilders par value.

**A. On the Bearer Shares**

(1) This interim dividend will be payable against surrender of coupon No. 166 on or after 25th September, 1979 at the offices of N. M. Rothchild & Sons Limited, New Court, St. Swithin's Lane, London EC4A 3DU on business days between the hours of 9.30 a.m. and 2 p.m.

Payment will be made in sterling at the buying rate of exchange current in Amsterdam at 2 p.m. on 18th September, 1979, in the case of coupons presented on or before that date, or on the day of presentation in the case of coupons presented subsequently. In view of the fact that Netherlands guilders funds are being provided by the Company for payment of this dividend, the usual foreign exchange commission will be deducted from the starting proceeds. Coupons must be accompanied by a presentation form, copies of which can be obtained from N. M. Rothchild & Sons Limited, and the face of each coupon must bear the stamp or other indication showing the name of the presenter.

Coupons must be left for an appropriate period for examination and must be handed in personally. Coupons cannot be paid through the post.

In the case of shareholders not resident within the Scheduled Territories the paying agent may, at the request of the Authorised Depositary presenting the coupon, pay the dividend in a different currency. Information in this respect will be supplied by the paying agent upon request.

Netherlands dividend tax at the reduced rate of 15 per cent will be deducted from the gross dividend where:

(a) United Kingdom income tax has also been deducted;

(b) Coupons are presented on behalf of residents of the United States of America, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Iceland, Luxembourg, Netherlands, Netherlands Antilles, Norway, South Africa, Spain, Sweden or West Germany, provided they lodge the appropriate declaration form.

Netherlands dividend tax at the reduced rate of 20 per cent will be deducted from the gross dividend where coupons are presented on behalf of residents of Indonesia or Surinam, provided they lodge the appropriate declaration form.

In all other cases Netherlands dividend tax of 25 per cent is to be deducted.

(2) On 25th September, 1979, this interim dividend will be paid to depositaries admitted by Centrum voor Fondesadministratie B.V., Amsterdam, on the shares whose dividend sheets were in their custody at the close of business on 14th September, 1979. Such payment will be made through the medium of N. M. Rothchild & Sons Limited, after receipt by them of a duly completed CF Dividend Claim Form.

Where appropriate, the usual affidavit certifying non-residence in the United Kingdom will also be required if payment is to be made without deduction of United Kingdom income tax.

Where under the double tax agreement between the United Kingdom and the Netherlands 15 per cent Netherlands dividend tax has been withheld, the 15 per cent Netherlands tax is allowable for a resident of the United Kingdom as a credit against the United Kingdom income tax payable in respect of the dividend. The deduction of United Kingdom income tax at the reduced rate of 15 per cent instead of at the Basic Rate of 30 per cent represents a provisional allowance of credit at the rate of 15 per cent.

**B. On the Registered Shares registered in the United Kingdom**

Section of the Amsterdam Register.

The sterling amount of this interim dividend is fixed at 124.901 p per share based on the sterling/guilder rate of exchange, being Nfls 4.4035 = £1, current in Amsterdam on 13th September, 1979.

The record date will be 24th September, 1979; shareholders registered at the close of business on that date will be entitled to receive the dividend.

On or before 16th October, 1979 dividend warrants will be posted by the transfer agent, Algemene Bank Nederland N.V., Amsterdam, to shareholders registered in their books on the record date.

From the dividend on the registered shares Netherlands dividend tax of 25 per cent has also to be deducted. Where under the relevant tax convention shareholders are entitled to a reduction of the Netherlands dividend tax, this can only be effected through a request for a partial refund of the tax withheld on the appropriate tax officials.

17th September, 1979 ROYAL DUTCH PETROLEUM COMPANY

**WEEK'S FINANCIAL DIARY**

The following is a record of the principal business and financial engagement during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interim or final. The sub-divisions shown below are based mainly on last year's timetable.

<b>TODAY</b>	<b>WEDNESDAY, SEPTEMBER 19</b>	<b>FRIDAY, SEPTEMBER 21</b>
<b>COMPANY MEETINGS</b>	<b>COMPANY MEETINGS</b>	<b>COMPANY MEETINGS</b>
Anglo-American, Alton, Vale Road, Tonbridge, Kent, 3	Anglo-American, Alton, Vale Road, Tonbridge, Kent, 3	Anglo-American, Alton, Vale Road, Tonbridge, Kent, 3
British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU	British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU	British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU
British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU	British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU	British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU
British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU	British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU	British Overseas Airways, Winchester House, 77, Finsbury Square, London EC2A 3DU

**Kleinwort, Benson Limited announces**

**Kleinwort Benson Eurobond Fund Limited**

Following the recent relaxation in United Kingdom exchange controls, many foreign currency securities can now be bought without incurring the investment currency premium.

Kleinwort Benson Eurobond Fund is designed to take advantage of this by investing in a diversified portfolio of fixed interest bonds denominated in Deutschmarks and other EEC currencies as well as U.S. Dollars, Swiss Francs and Yen.

The Fund will seek to provide security and preserve investors' capital by anticipating movements in exchange and interest rates. It is expected to provide an income of around 8% per annum initially.

The Fund, incorporated in Guernsey, is managed and advised by subsidiaries of Kleinwort, Benson Limited which have particular expertise in this specialised field.

The first subscription date is 14th October 1979. Shares may be issued and redeemed thereafter each week by reference to their asset value.

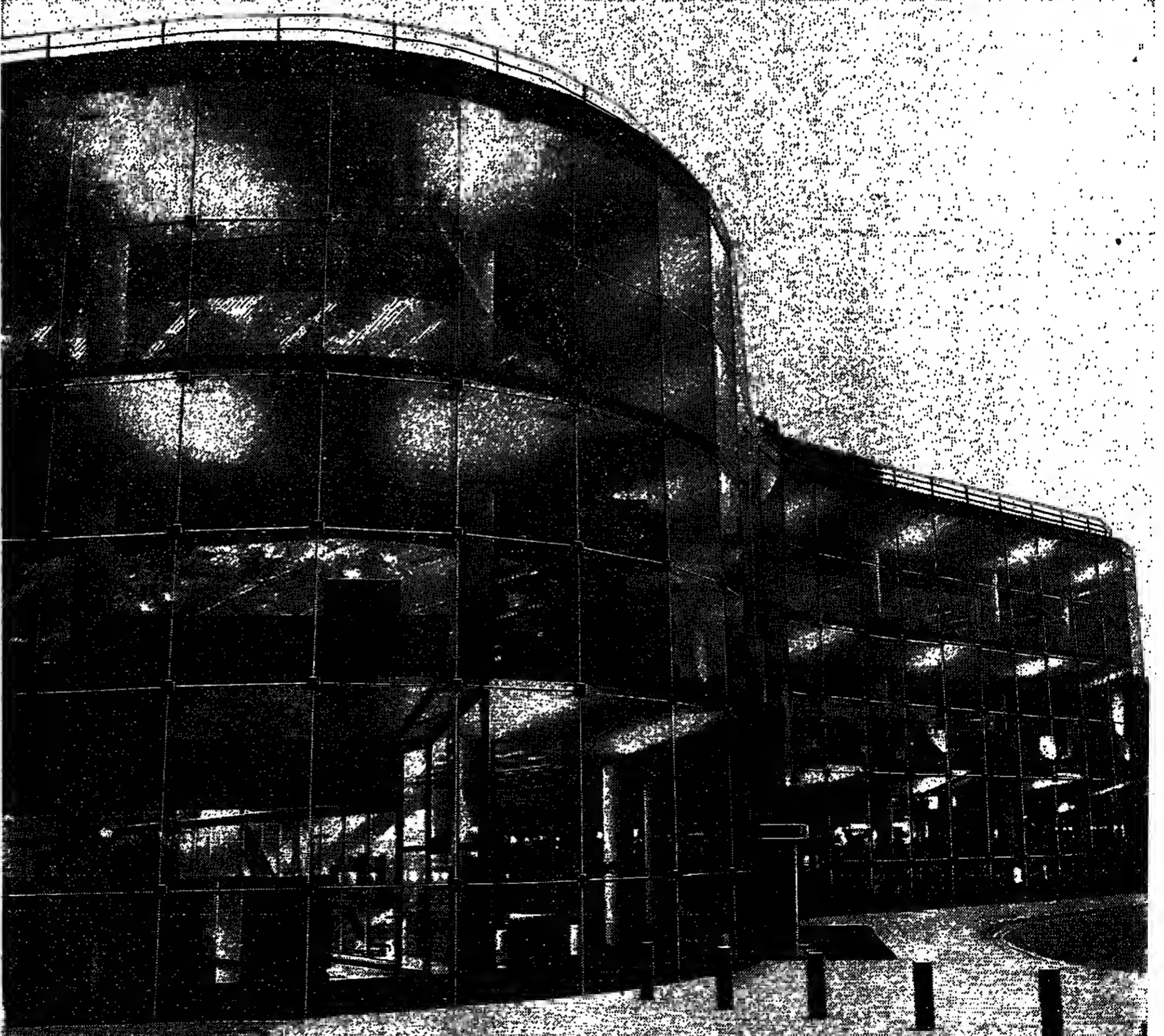
Copies of the prospectus containing details of the Fund and application forms are obtainable from:

**Kleinwort, Benson Limited,**  
20 Fenchurch Street, London EC3P 3DB (Telephone 01-623 8000)

**Rowe & Pitman,**  
1st Floor, City Gate House, 39/45 Finsbury Square, London EC2A 1JA (Telephone 01-606 1066)

This advertisement does not constitute an invitation to the public to subscribe for or purchase any shares.

**PILKINGTON**



The country head office of Willis, Faber & Dumas Limited. Architect: Foster Associates.

In the 1950s, our first full-scale float plant made unsaleable glass for 14 months. In each of those months, we spent over £400,000 at today's prices—tracing, analysing and solving problems. As everyone knows, perseverance—and investment—paid off in the end.

Today, the float glass process is licensed in 18 countries, and earns Britain over £30m a year in licensing revenue.

Throughout the world it has transformed the production of high quality flat glass for buildings and the automotive industry.



How's that for enterprise!

**WADHAM STRINGER**

**ROLLS-ROYCE**

**Official Distributors for Rolls-Royce and Bentley.**

**GUILDFORD**  
Woodbridge Road, Guildford, Surrey. Tel. 08231. Tlx. 859255

1979 Sept. Rolls-Royce Corniche II finished in Willow Gold with Dark Brown hide. Delivery mileage.

1978 June Rolls-Royce Corniche II finished in Willow Gold with Beige hide interior and Brown Everflex roof. 8,000 miles.

1978 Dec. Rolls-Royce Silver Shadow II finished in Chestnut with Beige hide interior, 900 miles.

1978 March Rolls-Royce Silver Shadow II finished in Cardinal Red with Beige hide interior, 17,000 miles.

1978 Jan. Rolls-Royce Silver Shadow II finished in Gunmetal Grey with Grey hide interior, 10,000 miles.

1977 Oct. Rolls-Royce Silver Shadow II finished in Walnut with Tan hide upholstery, 22,000 miles.

1976 Feb. Rolls-Royce Silver Shadow finished in Shell Grey with Surf Blue hide interior, 38,000 miles.

1975 March. Rolls-Royce Silver Shadow finished in Peacock Blue with Beige hide upholstery, 30,000 miles.

New Jaguars and Daimlers now in stock. Please telephone for full specifications.

**TORQUAY**  
Lisborne Square, Torquay. Tel. (0803) 24321

1975 July Corniche Convertible in Walnut with Beige hide upholstery and Beige hood. A beautiful one-owner car, 30,000 miles. Offered at £28,850

1977 May Silver Shadow in Honey with Brown Everflex roof and Beige hide upholstery. Picnic tables. 13,800 miles. Superb. £35,500

1974 Aug. Flared Arch Silver Shadow in Seychelles Blue with Blue hide, 61,400 miles. A sound investment at £19,850

1971 June Bentley T finished in Silver Chalk with Red leather interior, 64,642 miles. Full service history. Superb condition. £14,750

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The only specialist Citroen dealer serving the City of London. Call us for your new Citroen car. Wide choice including the GS Petrol and 9 Special.

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**COOPER CAR COMPANY**  
20 Paul Street, London EC2.

**COMPANY NOTICES**

**KOMATSU FORKLIFT CO., LTD. (CDRs)**

The Board of Directors of Komatsu Forklift Co. Ltd. has announced that shareholders, who will be registered in the books of the Company on September 20th, 1979, will be entitled to receive a 10% gratis distribution of new shares. Consequently the undersigned designated dividend of 7 of the CDRs for this purpose. In Japan the shares are traded as bonus as from September 20th, 1979.

Amsterdam, September 18th, 1979.

**AMSTERDAM DEPOSITARY COMPANY N.V.**

**DAVIS AND METCALFE LTD.**

NOTICE IS HEREBY GIVEN that the Treasurer Books of the Company will be closed from 24th September, 1979 to 27th September 1979, both dates inclusive.

By Order of the Board,  
R. ALLEN, Secretary.

Director Works,  
Chester.

**ANTHROLOGIST SVENSK EXPORTKREDIT**  
Growth (Kredit Credit Conversion) 7 1/2% NOTES 1983

**G. WARRING & CO. Ltd.** announce that the first issue of £100,000,000 new 7 1/2% Convertible Notes will be issued on 15th October, 1979.

U.S. dollars 14,200,000 nominal amount of the new Convertible notes will be issued on 15th October, 1979.

London EC2P 3DU  
17th September, 1979.

**CITY OF TURIN**  
6 1/2% Sterling/Deutsche Mark Bonds 1964/1984

S. G. WARBURG & CO. LTD., announces that the redemption instalment of £330,000 due 15th October, 1979 has been met by purchases in the market to the nominal value of £270,600 and by a drawing of Bonds to the nominal value of £270,600.

The distinctive numbers of the Bonds, drawn in the presence of a Notary Public, are as follows:-

324 to 329	331	332	335	336	341 to 344	348	349
351 to 353	356	358	370 to 378	379	383	407 to 412	
416 to 438	440 to 448	455	455	460	462	463	466 to 474
496 to 497	514	553	555	563	565 to 568	571 to 573	
575 to 581	586 to 588	590 to 592	590	592	594	595	603 to 612
622	626	627	623 to 633	634	636 to 643	650	
603 to 614	622	627	628	628	633 to 640	645 to 650	
654	665 to 670	674 to 683	1002 to 1006	1012 to 1014	1012 to 1014	1012 to 1014	
1027	1028	1030 to 1033	1035 to 1038	1041 to 1044	1048 to 1050	1048 to 1050	
1065	1068	1069	1071 to 1074	1077	1088	1084 to 1088	
1112 to 1114	1120	1120	1122 to 1140	1143 to 1145	1160	1169	
1175 to 1177	1208	1209	1211	1212	1215	1221 to 1228	
1239 to 1271	1278 to 1281	1283	1284	1292 to 1295	1301 to 1304	1301 to 1304	
1306 to 1309	1315 to 1317	1319 to 1323	1328 to 1336	1341	1347	1347	
1343	1357 to 1360	1371	1476 to 1484	1487			
1489 to 1492	1498 to 1508	1517 to 1523	1526	1534 to 1551			
1555 to 1558	1560	1561	1565	1569 to 1573	1575	1582	

On 15th October, 1979 there will become due and payable upon each Bond drawn for redemption the principal amount thereof, together with accrued interest to said date at the office of:-

**S. G. WARBURG & CO. LTD.,**  
30, Gresham Street, London, EC2P 2EB

or with one of the other paying agents named on the Bonds.

Interest will cease to accrue on the Bonds called for redemption on and after 15th October, 1979 and Bonds so presented for payment must have attached all coupons maturing after that date.

£1,700,000 nominal Bonds will remain outstanding after 15th October, 1979.

The following Bonds from earlier redemptions have not yet been presented for payment:-

1976	1977	1978
£500 Bond No. 161	£100 Bond Nos. 9760 9761 9762 10087	£100 Bond Nos. 11598 12371 12372 12373

30, Gresham Street, London, EC2P 2EB. 17th September, 1979

**LEGAL NOTICES**

**IN THE MATTER OF L. E. R. NAVARRO LIMITED AND IN THE MATTER OF THE COMPANIES ACT 1948**

NOTICE IS HEREBY GIVEN that the creditors of the above-named company, which is being voluntarily wound up, are required, on or before the 18th day of October, 1979, to send in their full Christian and surnames, their addresses and descriptions, full particulars of their debts or claims, and the names and addresses of their Solicitors (if any), to the undersigned

**KEITH DAVID GOODMAN, FCA.**  
of 3/4 Benlck Street, London, W1A 3BA

the Liquidator of the said Company, and, if so required by notice in writing from the said Liquidator, to come in and prove their debts or claims at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

Dated this 6th day of September, 1979.

**K. O. GOODMAN, Liquidator.**

**IN THE MATTER OF SPORTCARE LIMITED AND IN THE MATTER OF THE COMPANIES ACT 1948**

NOTICE IS HEREBY GIVEN that the creditors of the above-named company, which is being voluntarily wound up, are required, on or before the 18th day of October, 1979, to send in their full Christian and surnames, their addresses and descriptions, full particulars of their debts or claims, and the names and addresses of their Solicitors (if any), to the undersigned

**MORRIS RAYMOND DORRINGTON**  
of 4 Charnhouse Square, London EC1M 6EN.

the Liquidator of the said Company, and, if so required by notice in writing from the said Liquidator, to come in and prove their debts or claims at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

Dated this 20th day of August 1979

**K. O. GOODMAN, M. R. DORRINGTON**  
Liquidators.

**IN THE MATTER OF ALAN BURROW, JOHN LYVOK (HARPENDEN) LIMITED AND IN THE MATTER OF THE COMPANIES ACT 1948**

NOTICE IS HEREBY GIVEN that the creditors of the above-named company, which is being voluntarily wound up, are required, on or before the 1st day of October, 1979, to send in their full Christian and surnames, their addresses and descriptions, full particulars of their debts or claims, and the names and addresses of their Solicitors (if any), to the undersigned

**MORRIS RAYMOND DORRINGTON**  
of 4 Charnhouse Square, London EC1M 6EN.

the Liquidator of the said Company, and, if so required by notice in writing from the said Liquidator, to come in and prove their debts or claims at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

Dated this 20th day of August, 1979.

**K. O. GOODMAN, M. R. DORRINGTON**  
Liquidators.

**IN THE MATTER OF MONTAGUE JOYCE LIMITED AND IN THE MATTER OF THE COMPANIES ACT 1948**

NOTICE IS HEREBY GIVEN that the creditors of the above-named company, which is being voluntarily wound up, are required, on or before the 1st day of October, 1979, to send in their full Christian and surnames, their addresses and descriptions, full particulars of their debts or claims, and the names and addresses of their Solicitors (if any), to the undersigned

**KEITH DAVID GOODMAN FCA.**  
of 3/4 Benlck Street, London W1A 3BA

the Liquidator of the said Company, and, if so required by notice in writing from the said Liquidator, to come in and prove their debts or claims at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

Dated this 5th day of September, 1979.

**K. O. GOODMAN, Liquidator.**

**BUSINESSMAN'S DIARY**  
**UK TRADE FAIRS AND EXHIBITIONS**

Date	Title	Venue
Current	Chelsea Antiques Fair (0727 56059) until Sept. 21	Chelsea Old Town Hall
Current	M.A.S. 79—International Menswear Fair 101-539 50411 (until Sept. 19)	Earls Court
Current	Filtex/Dustex '79—2nd World Filtration Exhibition (01-238 0811) (until Sept. 20)	Olympia
Sept. 18-21	Firetech '79 International Fire Protection and Control Exhibition 101-637 24001 (01-734 7471)	Brighton Exbn. Centre
Sept. 19-20	International Exhibition of Styling Accessories	Russell Hotel, W1
Sept. 24-26	Weightech '79 101-686 5741	Metropole Ex. Centre Brighton
Sept. 24-25	International Welding and Metal Fabrication Exhb. (021-705 6707)	National Exhibition Centre, Birmingham
Sept. 25-25	International Conference and Exhibition on Information Processing—EURN IFIP (01-405 6231)	Wembley Conference Centre
Sept. 25-25	Business Efficiency and Equipment Exhibition (0272 3150)	Exhibition Centre, Bristol
Sept. 28-30	High Fidelity Autumn Exhibition (Radnage 2674)	Cuorard Int. Hotel, London
Sept. 27-28	Interior Designers and Decorators Association Exhibition—DECOREX (01-242 6171)	Grosvenor House, London
Sept. 30-Oct. 3	Frozen Foods and Freezer Festival 101-353 4855	West Centre Hotel, London
Sept. 30-Oct. 3	British International Footwear Fair (01-739 2071)	Olympia
Sept. 30-Oct. 3	International Sports and Leisure Exhibition—ISLE (01-734 9694)	National Exhibition Centre, Birmingham
Oct. 2-Oct. 4	Southern Floorcoverings Exhibition (0241 58423)	Metropole Ex. Centre Brighton
Oct. 3-4	Electrical Research Association Battery Exhibition (Leatherhead 264045)	Royal Garden Hotel, W
Oct. 3-4	London Bakers Exhibition (01-947 7781)	New Horticultural Hall
Oct. 6-9	Salon International (Hairdressing and Beauty) (01-261 9000)	Wembley Conf. Centre
Oct. 7-10	International Garden and Leisure Exhibition—GLEE (01-546 6757)	National Exhibition Centre, Birmingham

**OVERSEAS TRADE FAIRS AND EXHIBITIONS**

Date	Title	Venue
Current	International Fair (until Sept. 23)	Ghent
Current	International Engineering Fair (01-278 0281) until Sept. 20	Brno
Current	International Autumn Fair 101-486 1951 (until Sept. 23)	Zagreb
Current	LitAM—Furniture Trade Fair (until Sept. 19)	Bonn
Current	Clothing Fair (until Sept. 19)	Brussels
Current	Fall Gift Show (01-540 1101) (until Sept. 21)	Toronto
Sept. 18-21	Int. Security, Safety and Protection of Mankind and Property Exbn. 101-486 1951	Paris
Sept. 19-21	International Office Equipment Exbn.—SICOB (01-429 3884)	Tokyo
Sept. 21-25	International Packaging Show 101-734 9685	Paris
Sept. 22-25	Int. Trade Fair of Sports Goods, Camping Equipmt. and Garden Furniture—SPOGA (01-408 0356)	Cologne
Sept. 22-26	Industrial Equipment and Material Exhibition—INDEQUEX	Hong Kong
Sept. 23-26	Hardware Trade Fair (01-439 3964)	Paris
Sept. 25-27	National Business Aircraft Association Convention and Exhibition	Atlanta
Sept. 26-30	Research and Development Exhibition—INNOVEX '79 (01-238 0911)	Stuttgart
Sept. 27-30	International Suppliers Fair for the Motor Industry—AUTOTERNIK	Paris
Sept. 28-Oct. 5	International Exhibition of Motor Maintenance and Car Accessories (01-439 3964)	Copenhagen
Sept. 28-Oct. 7	International Motor Cycle and Cycle Show	Paris
Sept. 29-Oct. 8	International Autumn Trade Fair	Metz
Sept. 30-Oct. 3	Irish Fashion Industry Fair (Dublin 763385)	Dublin
Sept. 30-Oct. 5	International Fair for Machine Tools and Tools (01-540 1101)	Copenhagen
Oct. 1-5	Chemical Plant Engineering Exhibition (01-486 1951)	Tokyo
Oct. 2-11	International Textile Machinery Exhibition 101-651 2181	Hanover
Oct. 3-5	Hong Kong Toy and Gift Fair 101-950 1955	Hong Kong
Oct. 5-10	Electronics Show (01-734 9685)	Osaka

**BUSINESS AND MANAGEMENT CONFERENCES**

Date	Title	Venue
Current	ICMA: Decision Making Techniques for the Management Accountant 101-637 2311 (until Sept. 21)	Loughborough
Sept. 25	Planned Savings: Personal Finance for the Expatriate 101-251 35461	Inn on the Park, W1
Sept. 26-29	Institute of Purchasing and Supply: National Conference—Enterprise, the Corporate Role of Purchasing and Supply Management (Ascot 2711)	Sheffield
Sept. 27	HS—Conference Studies: Captive Pension Funds (01-453 2882)	Royal Lancaster Hotel, W2
Sept. 27-28	AMR International: The 1979 International Conference on Industrial Leasing (01-262 2782)	London Press Centre
Sept. 28	CCC: The Interbank and London Short Term Money Markets (01-222 6382)	
Sept. 30-Dec. 14	BTSC: General Management Course (04582 5444)	Inn on the Park, W1
Oct. 1	BIM: Energy Saving with Microprocessors (01-405 34551)	Heaton Mount, Bradford
		Woking, Surrey
		Europa Hotel, W1

**COMPANY NOTICES**

**NOTICE OF RATE OF INTEREST**  
U.S.\$30,000,000

**SUMITOMO HEAVY INDUSTRIES, LTD.**  
Incorporated with limited liability in Japan  
Guaranteed Floating Rate Notes Due 1984

Unconditionally guaranteed as to payment of principal and interest by  
**THE SUMITOMO BANK, LIMITED**  
(Incorporated with limited liability in Japan)

In accordance with the provisions of the Notes and Agent Bank Agreement between Sumitomo Heavy Industries, Ltd., The Sumitomo Bank, Limited and Citibank, N.A., dated 5th September, 1979, notice is hereby given that the Rate of Interest for the initial three-month interest period has been fixed at 13 1/4% p.a. and that the interest payable on the relevant Interest Payment Date, 13th December, 1979, against Coupon No. 1 in respect of U.S.\$30,000,000 nominal amount of the Notes will be U.S.\$25.48 and has been computed on the actual number of days elapsed 1911 divided by 360.

14th September, 1979.  
By: Citibank, N.A., London, Agent Bank

**CITIBANK**

**P.S.A. PEUGEOT-CITROEN**

A French "société anonyme" governed by the Articles 118 through 150 of the French law of July 24, 1966.  
Capital: French Francs 861,837,130

Head Office: 75, avenue de la Grande Armée, Paris (France).  
Commercial Register: Paris B784,646,796

**FIRST NOTICE TO HOLDERS OF BONDS 9 1/2% 1979-1987 OF FRENCH FRANCS 5,000**

The bondholders of the International Loan 9 1/2% 1979-1987 issued by P.S.A. PEUGEOT-CITROEN are convened to an Ordinary General Meeting to be held at 75, avenue de la Grande Armée, Paris (France) on October 22, 1979 at 3 p.m. in order to consider the following agenda:

- Appointment of the bondholders permanent representative, designation of the substitute representatives.
- Determination of the bondholders' representatives' capacities and of the remuneration given to the permanent representatives.

To permit the bondholders to attend or to be represented at this meeting, the bonds or their deposit receipts, must be deposited at least five days before the date fixed for the meeting, at the offices of the banks having participated in the placing of these bonds and from whom proxies or admission cards can be requested. This meeting shall be validly held if the holders of twenty-five per cent of the outstanding bonds entitled to vote are present in person or represented.

The "Directoire"

**HARMONY GOLD MINING COMPANY**

Incorporated in the Republic of South Africa  
A Member of the Barlow Rand Group

**DIVIDEND DECLARATION**

NOTICE IS HEREBY GIVEN that Dividend No. 43 of 35 cents per share has been declared in South African currency, as an interim dividend in respect of the year ending 30th June, 1980 payable to members registered in the books of the company at the close of business on 25th September, 1979. The register of members will be closed on 25th September, 1979, inclusive, and dividend warrants will be mailed on or about 6th November, 1979.

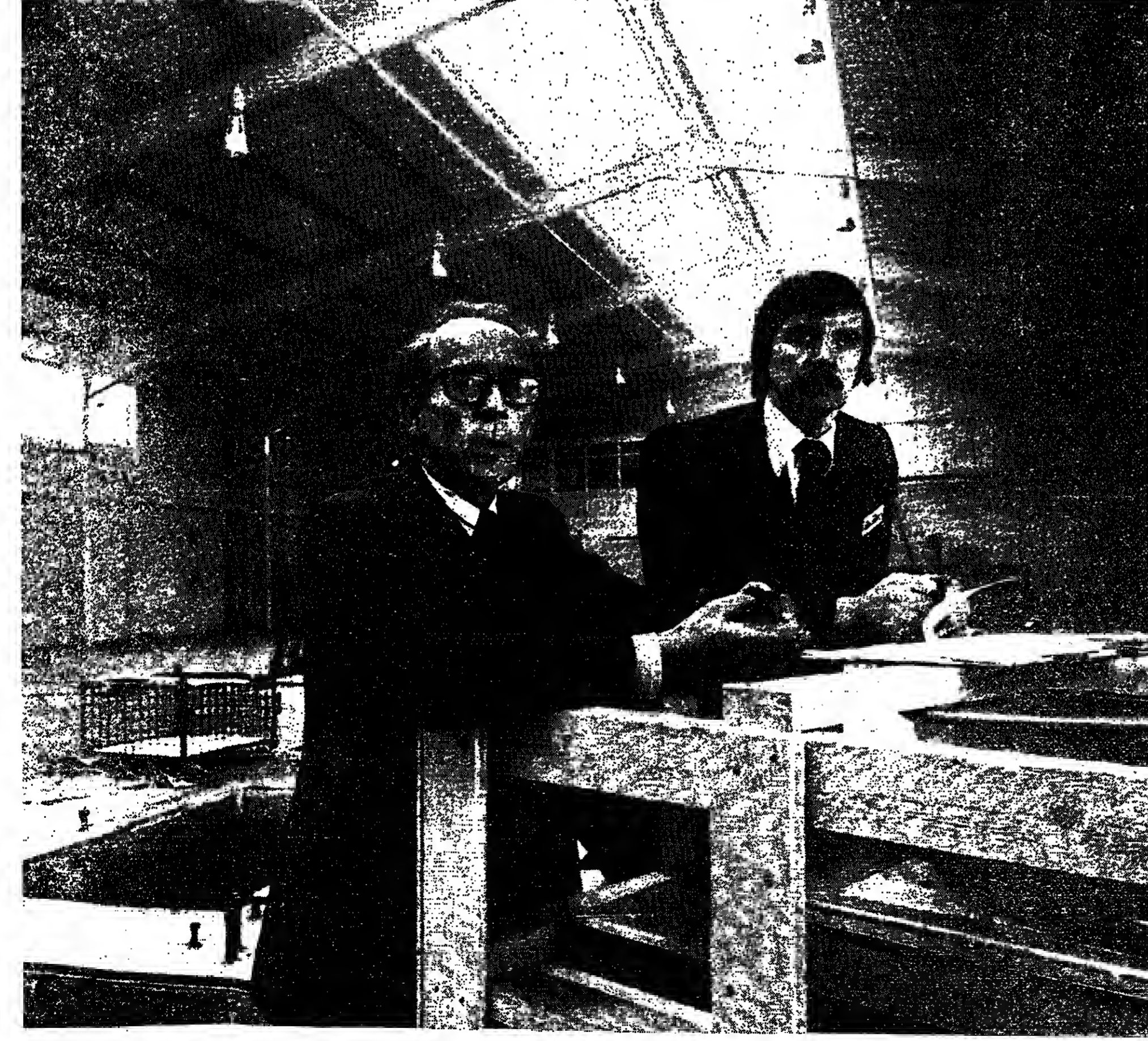
The date of exchange at which the dividend will be converted into United Kingdom sterling for payment by the United Kingdom Registrar and Transfer Agents will be the date of the exchange of exchange between Johannesburg and London ruling on the first business day after 25th September, 1979 on which foreign currency dealings are transacted.

Where applicable South African non-resident shareholders' tax of 15 per cent will be deducted from the dividend.

The full conditions of payment of the dividend may be inspected at or obtained from the offices of the company in Johannesburg or in the United Kingdom.

By order of the Board  
**RAND MINES LIMITED**  
Secretaries  
per F. Goodwin

Registered Office:  
2nd Floor, 42 Park Street,  
Johannesburg 2001  
P.O. Box 100  
Marshfield, 107  
Office of the Company in the United Kingdom:  
40 Abchurch Lane,  
Charterhouse Buildings,  
London EC1P 3DF  
Chartered Accountants and Transfer Agents  
P.O. Box 122,  
Charterhouse,  
Park Street,  
Ashford, Kent TN24 8EQ  
13th September, 1979.



**Plan with electricity for real efficiency**

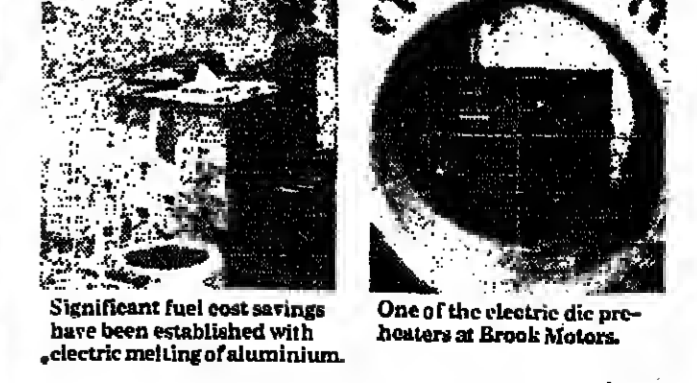
As Engineering Services Manager of Huddersfield-based Brook Motors Limited (part of the Hawker Siddeley Group), Jack Goodman has to turn company plans into positive results. He's pictured here beside Yorkshire Electricity Board's Ian Flint, with an electric furnace ready for installation in their new diecasting department.

The launchpad for a ten-year plan to streamline production of their range of electric motors, the Brook new diecasting plant will be all-electric. Jack Goodman explains: "After discussions with our Electricity Board we adopted one electric melting furnace on trial. Energy cost comparisons quickly established its advantages - and it gave us consistently better quality castings too". So pleased is the company with results, that they now plan to go electric in their new rotor casting shop pictured here.

They also investigated, and are now using, electric die pre-heaters. Indeed, from the battery-powered lift trucks providing smooth, efficient materials handling, to spark erosion machines which form their tools with unmatched precision, electricity is central to Brook manufacturing strategy.

It's an investment which is paying off for management and operatives alike - "Electricity has given us better product quality and a better environment... it's much cleaner and easier to control".

To find out how electricity can increase your company's efficiency and profitability, contact an Industrial Sales Engineer at your Electricity Board.



Significant fuel cost savings have been established with electric melting of aluminium.

One of the electric die pre-heaters at Brook Motors.

**INVESTELECTRIC**

The Electricity Council, England and Wales. 0202274

امكوزان الذر



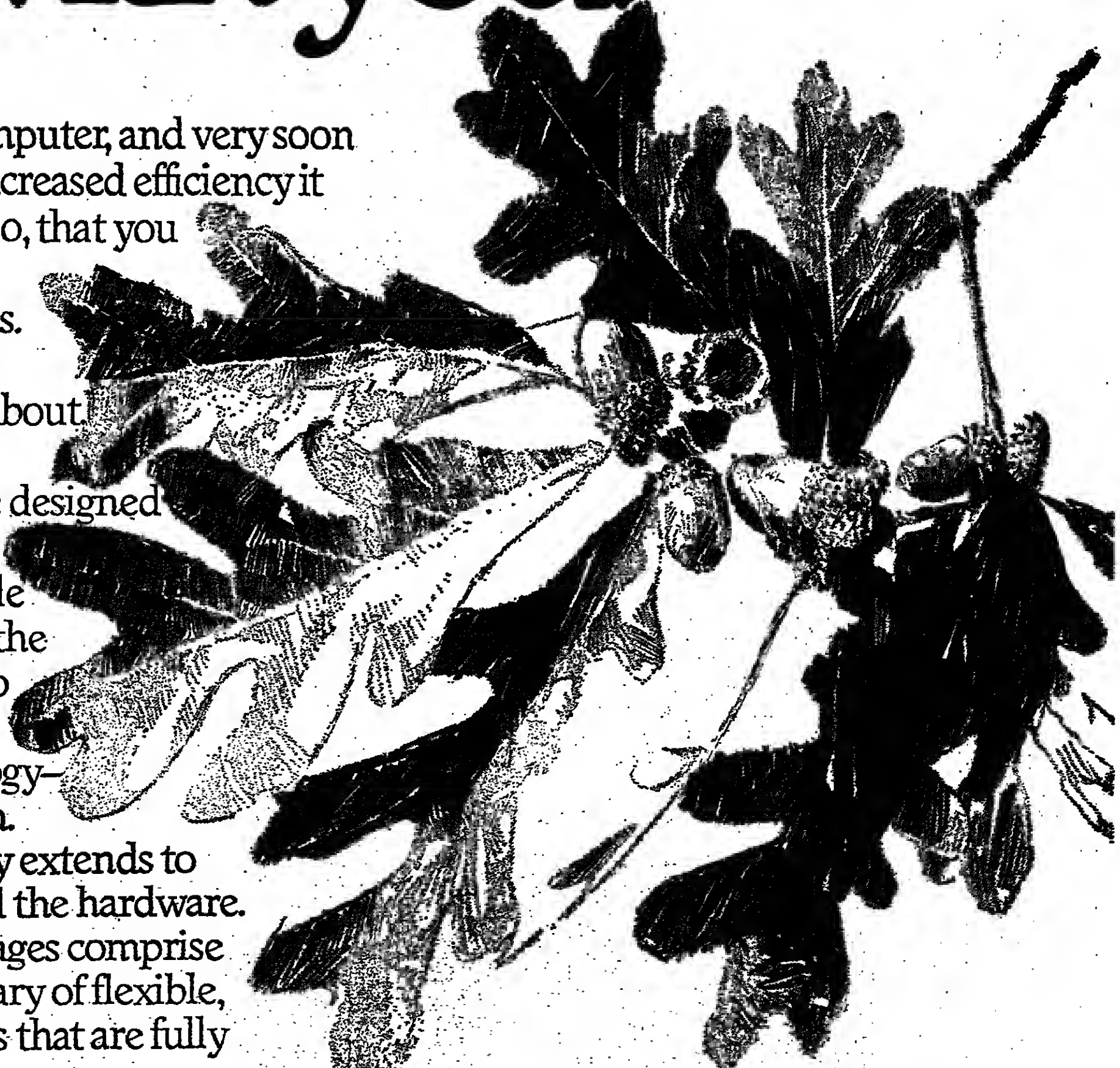
# NCR means computer systems that can grow with you.

You buy a computer, and very soon you're enjoying the increased efficiency it brings you. So much so, that you quickly outgrow your computer's capabilities.

It's a problem that NCR knows all about. Which is why NCR computer systems are designed to grow with you. Each one is compatible with all the others in the range, allowing you to upgrade to any level of computer technology—as and when you wish.

This capability extends to both the software and the hardware. NCR's software packages comprise a comprehensive library of flexible, ready-made programs that are fully interactive.

NCR means computer systems which allow for natural expansion.


**NCR**

NCR means computers.



# FINANCIAL TIMES SURVEY

Monday, 17 September 1979

## Computer Services

There are now more than 3,000 computer services companies in Europe, and the industry in the UK is playing a full part in developing what has become a major force. Nevertheless, there are some complex problems to be solved and there is clearly a need for more Government awareness of the difficulties facing this rapidly growing industry.

# If you read through this supplement you'll realise why we're on the front page.

Take a deep breath and press on. Go on; it's all there. Hardware, software, international networks, world time sharing.

Everything you'll ever need to know if it's vital that you understand the computer.

But do you really need to?

Frankly, at Comshare, we believe that it's not what we can tell you about the computer business, it's what we can tell you about your business that's important. (Or your profession for that matter.)

How can computers be of help in business and industry?

Or banking, central government and local authorities?

Well, at Comshare, we believe that it's not enough for our people to be fluent in computer language.

They also have to be able to talk sense to you about your business.

So, over the years, although we've invested heavily in computers of the most sophisticated variety (since February 1977 alone we've spent over £4½ million) we've spent yet more on

employing something that's far more important.

Professionals of the most sophisticated variety.

Look at each one of our specialised areas of activity.

Financial planning for commerce and industry.

Services to both central and local government.

Materials management for industry.

Services to the international banking community.

Specialised applications for the oil industry.

In every case we employ planners and support teams directly from the industry concerned and then train them thoroughly in the use of computers.

The net result is this.

They fully understand computers in relation to a given task. A given task that they also fully understand.

As for the computers themselves we program them to speak the same language as the client.

And expert advice is on hand at

any one of our many, locally based, Comshare offices.

Already, over a thousand companies use us every month.

And, you may be surprised to learn that at least a thousand of them have their own computer installations.

However, maybe it isn't so surprising when you consider our level of specialisation.

It's this degree of specialisation which has got us where we are.

The most consistently successful computer services bureau in Europe.

With a world-wide timesharing network.

And it is probably why we are where we are right now.

On the front page of this supplement.

If you'd like to know more call Mike Tollit at Comshare Limited, 32/34 Great Peter Street, London SW1P 2DB. Tel 01-222 5665.

**COMSHARE**

Making the computer make sense.

COMPUTER SERVICES II

# Growing sector becomes a key industrial force

DURING THE run-up to the recent general election, those political figures who, it was anticipated, would have to make policy in Britain's electronics industry, heard many presentations from senior persons operating within the service bureau or software and systems groups, on the industry and its importance.

Since the election and under the new administration, not a murmur has been heard and it is almost as if the computing services industry has ceased to exist so far as the Government is concerned. Yet there can be few more important undertakings in the country, since the combined turnover of the companies grouped under the banner of the Computing Services Association can com-

pare honourably with the total annual sales of computing equipment in Britain—and it should be remembered that such sales produce a huge import deficit.

Services growth is at a rate of about 25 per cent, better far than for any other industrial sector outside information handling, which alone should call for some official interest. But the industry has some difficult problems to solve, several of which it cannot handle by itself since political decisions at international level, either within the European Economic Community or generally, are involved. And the most difficult of these is trans-national data flow, as we shall see later.

Clearly, there is need for Government awareness of the

problems and for a continuing dialogue, particularly after the years of hard work put in by CSA officers—with many other tasks on their hands—to establish this dialogue with the preceding government.

## Booming

Be that as it may, the industry is booming and in the words of the director general of the Computer Services Association, Alan Benjamin, it is becoming a "force in Europe" after growing at 20 per cent compound during the past five years. Indeed, it can be considered a major industrial force, though too many still consider it to be much less important than the computing equipment manufacturing side.

But, Benjamin points out, manufacturing is so heavily dominated by groups controlled from outside Europe there is little hope that the area will ever come to control its own destinies in machine technology. Not so in services. This industry by its nature is "probably indomitable." One of the reasons is that brain power cannot be monopolised and it is by intelligent use of the best resources—human and electronic—that the service industry exists and flourishes.

In Europe there are around 3,300 computing service companies of all types and their revenue for 1978 can be estimated at around \$54bn.

Over the years, a vigorous interchange has built up, in part due to deliberate French government action during the inception of Plan Calcul, and several of the larger UK groups have established a number of subsidiaries in continental Europe. This has involved them in learning to deal with a whole gamut of novel legislation and business practice and even learn a language or two.

In moving towards a multinational status, the industry has seen the need to tackle the various telecommunications organisations of the individual countries and show them how their tangle of incompatible procedures was strangling the growth of new industries. This is one of the reasons for the emergence of ECSA, the European Computing Services Association. But because the European industry has developed against this background of disparate legislation and language, where the U.S. industry has enjoyed a homogeneous market place, it has had to use a proportion of resources to solve inherent problems that American groups have been able to devote to improving services or writing new software.

Meanwhile, services within Europe are not all that far behind the U.S. Adapso (Association of Data Processing Organisation) figures indicate a growth rate of 17 per cent overall with total turnover in 1978 at \$7.5bn, 19 per cent up on 1977 and a target figure of \$16bn forecast for 1982.

Of great importance in these figures is that software accounts for 10 per cent—Britain is credited with being the world's most important centre for software innovation—and that software in the U.S. is growing faster than the other services sectors at 27 per cent.

In fact, expertise such as software and systems development constitutes the heaviest charge on the processing service companies' own budgets since, according to Adapso, machinery has now dropped to 16 per cent of a typical service unit's costs.

This is, of course, partly due to the fact that a service organisation will tune up its processor while they are running in a way that sometimes amazes and often worries the makers. At the same time, the bureaux operate their equipment for much longer than the average user and while this practice of running the machines into the ground should make suppliers of equipment rather indifferent as to where bureaux buy, it is not so in practice—witness the willingness of Honeywell to build a number of obsolete sigma processors for use by Comshare!

Although this has never been admitted, it is my feeling that equipment manufacturers have learned and can learn so much from the service companies that

Heading	1971	1972	1973	1974	1975	1976	1977	1978
Computer processing	40,190	46,357	56,923	73,506	102,944	118,618	133,840	163,350
Professional services:								
(a) Systems	13,971	16,434	22,678	25,953	29,792	51,103	65,097	79,782
(b) Consultancy	4,788	5,824	7,357	9,849	12,103	24,445	39,650	43,735
Data preparation	6,643	7,600	8,324	9,750	11,150	4,921	4,433	4,806
Other billings	2,459	2,598	3,776	5,923	6,882	19,367	23,367	31,694
Unclassified	1,207	1,071	4,491	3,622	1,474	2,244	3,844	8,364
Total	69,238	79,684	104,049	128,606	184,348	220,700	265,431	332,071

Heading	1971	1972	1973	1974	1975	1976	1977	1978
UK clients:								
(a) Public services	7,670	11,116	13,940	15,182	18,393	30,261	33,098	41,319
(b) Others	37,187	40,186	51,118	63,664	82,419	113,173	138,623	180,469
Foreign clients	2,482	3,877	4,767	3,664	7,562	10,582	13,582	19,509
Other computer services	432	866	1,034	796	—	—	—	—
Parents/associates	20,206	23,316	32,988	43,300	55,974	66,704	79,138	96,783
Unclassified	861	323	2	—	—	—	—	—
Total	69,238	79,684	104,049	128,606	184,348	220,700	265,431	332,071
Of which net outside billings	49,032	56,368	71,061	85,306	108,374	153,996	186,273	241,238

it is not in their real interest to alienate them as customers. Turning to Britain, growth (as indicated by figures compiled from responses to Department of Industry questionnaires) is now around 25 per cent, well ahead of the U.S. and Europe. This year, total turnover for respondents representing about 90 per cent of physical services and perhaps 70 per cent for consultancy should go well over the £400m mark, the inference being that we already have a "billion dollar industry." The 1978 total was £332m compared with £265m a year earlier.

There has, of course, been a great deal of argument in the past about the way in which service organisations which are part of big manufacturing companies do their accounting—though senior staff from such groups have often told me that

they certainly do not have a "captive market" in the main company and have to compete for all they get from the latter. Be that as it may, billings for outside work grew more quickly in 1978, by 29 per cent to £241m.

Britain is in a strategic position so far as the big U.S.-based networks are concerned and frequently is used as a bridgehead into Europe. The history of mergers and acquisitions is such, however, that there remains only one completely independent bureau service house (CMG), though there are several independent software specialists, the other companies being either associates of large industrial groups or U.S. advanced bases.

Nevertheless, the Computer Services Association, after a painful end protracted gesta-

tion, has earned enough respect for the Department of Industry to coax it to the study of an important new industry—office electronics—with a view to establishing it so strongly in Britain that it cannot be swept away by a flood of imports.

CSA is influential in Europe and the parallel organisation—ECSA—speaking for eleven countries, can talk on an equal footing with the emergent supra-national groups in Brussels and elsewhere.

Is the day coming when joint action by ECSA/Adapso on manufacturers will be commonplace? That is an interesting question now that, over under U.S. control of general purpose, and mini machines has risen close to the \$30bn level.

Ted Schoeters



City Computer Systems, London, have reduced the number of terminals which clutter dealers' desks—by modifying a Sony 9 in. colour television by the addition of teletext decoding facilities. A salesman in the gilt operations room, (above), at Laurie Milbank, has access to a wide range of information, including the in-house CCS computer system, yet he needs to cope with only two terminals

## New technology helps to reduce costs

FIVE YEARS or so ago, when the mini-makers were threatening to sweep all before them, the whorled in the burning industry was the familiar "If you can't beat 'em, join 'em!" Thus, several service companies in Britain began to buy and install various types of mini-computers in user premises, operating as slaves to the main machines at the service centre. Centre-File, part of the NatWest empire was probably the first in this area.

Power of the new minis has been increasing by leaps and bounds and anyone at Prime or Perkin-Elmer will now tell you that their latest machines are more than a match for a whole series of mainline models costing five to 10 times more.

Meanwhile, the advent of microprocessors is helping mini-makers to reduce their prices and there is further pressure on those bureaux who have not yet done so to propose minis or micro-based stations to their customers. This pressure has, in some cases, resulted in price cutting action which is hardly wise in view of the rising cost of software and of people—always a major services industry overhead. Mini end micro promoters are not having it all their own way, however.

In the eyes of some consultants most of the small business computer systems in the hands of the average user are unsuccessful, that is compared with what a properly operated system could be doing. This stems from over-eagerness on the part of the neophyte to try to do everything on his new system, including those jobs definitely not suited for automation.

At the same time, the mini tends to be more vulnerable to interference for criminal ends partly because by definition it is more difficult to provide the security interlocks available with the large machines and their retinues of operating staff.

Limiting access to the mini also negates one of its main selling points—ease of use. A leading U.S. vendor of micro-based equipment, meanwhile, has filed for Chapter XI, indicating that it has at status somewhere between solvency and bankruptcy. Imsai Manufacturing Corporation, which so far has been an industry leader, lost heavily in its preceding fiscal year and, though profitable since then, it is still suffering from the aftermath of over-rapid expansion. This is believed to be affecting several other of the U.S. micro-houses.

Imsai started off by doing 80 per cent of its business in chips and had swung to about the same proportion in finished systems. Heavy costs in development and defective machinery have been the main problems which the company might not be able to solve. Any further intensification of the American recession in data processing—which does not seem to have hit the service industries yet—could affect other companies in this particular area of micro-chip exploitation.

Whatever happens here, it is an area that the service industries have to watch very closely if only because of the sweeping claims made for the new generation of micros.

Installation of minis and other forms of intelligent terminals on users premises by U.S. operators is being carried out by just over half the companies involved and at mid-year, 2,000 or so machines had been placed on site and connected into the mainframes and more than 5,000 are expected by end-1979. But how long this will continue, or whether the trend will be reversed is hard to say since operators have not made up their minds whether provision of maintenance and other services to mini-users will continue profitable. The big question being posed

in America is what happens following the considerable delay of six to nine months in deliveries of IBM's System 38 equipment. Some customers are pleased because of slower business conditions, others will face difficulties. They will undoubtedly be relying on bureaux to take up any urgent processing needs their current equipment cannot meet. Orders world-wide are put at 30,000 systems and whatever the outcome for IBM and its competitors, there clearly could be a good deal of benefit to the service groups.

Some bureaux specialise in turnkey operations where the ultimate user does not wish to become involved in all the complexities of selecting a machine, developing the system and training staff. The main problem here is the end-user frequently fails to specify exactly what he will want his future system to do and the outcome will normally be a compromise unless

of course, the end-user agrees to take from the vendor what his business really requires, leaving the company to do a study and indeed every other step in the vendor's hands. Sometimes, this will leave the user with surplus power the vendor may tap.

An interesting trend in distributed computing is the move, by ADP Network Services, among others, to install at larger user centres machines such as the DEC 2020 able to support 32 time-sharing users. Added to this equipment are a pair of processors, one of which allows the client to communicate with his own equipment from any point on the ADP net in the U.S., the UK and Europe. The other links the local machine to one of the three ADP central computer locations. This helps to solve problems of preventive maintenance and diagnostics while taking care of practically all operational tasks. Another way of solving user

CONTINUED ON NEXT PAGE

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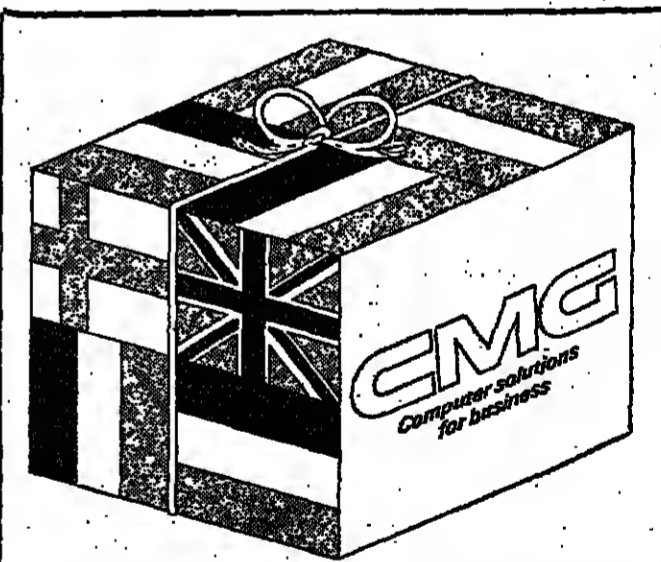
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COMPUTER SERVICES III

# Concern over use of sensitive data

A HANDFUL of governments—that of Canada, in particular—are becoming increasingly concerned at the amount of vital information, captured within their countries on every aspect of business and economic life, and then transmitted to a series of vast computerised databases in America. There it is used for processing and further application in solving problems of companies and other organisations in the countries where this data originates.

Some of the concern stems from the different approaches to privacy adopted in the various countries. Much more is beginning to flow from the realisation that where heavy use is made of an extensive foreign database equipped with powerful manipulation software, the users are spending large sums on improving their own services, but falling progressively further behind in high level processing knowhow.

One is dealing here with a much greater problem than that presented by a lack of, say, 5,000 expert jobs in Britain, multiplied by a factor of between eight and 10 for the whole of

Europe. American estimates show that at the moment, half of that country's GNP comes from information services and/or technology and this figure is growing. As indicated elsewhere, computer hardware alone earned \$30bn for the U.S. last year. Probably half the \$51bn revenues of the services industries in Europe this year will go to subsidiaries of large U.S. groups.

Far less than that will be remitted to parent companies in the U.S. because of the various arrangements between parent and subsidiary and the latter's local sponsoring groups where, as sometimes happens, there is joint ownership with a major national company.

This is not a criticism of the way in which the big networks operate. It is intended to point to serious concern in America that many countries may follow the line taken by some Canadian provinces to prevent credit information from going outside their territorial jurisdiction.

The problem is all the more worrying as greater reliance is placed by governments and

industries all over the world on easy access to large information stores. And seen from the U.S. growing "foreign" resentment and indeed overt action is not along the lines of a trade war but a counter-revolution to the information revolution.

Many countries which need the data held in U.S. centres seem to fear "electronic colonisation" and that the constant flow of data from such centres could undermine their national status through insidious propaganda.

Most of the European countries are raising barriers to the transfer of sensitive personal data and some American observers feel that there may come a time when data banks may have to move to "data havens" where no trammels exist to what can be stored or transmitted.

Several of the major international operators of information processing networks including Honeywell/GE and CDC have drawn some of the critics' teeth by establishing major data centres for their world networks inside Europe.

But it is a fact that several new large networks are being planned by common carriers to incorporate a large degree of processing.

Though there will undoubtedly be head-on conflict between U.S. carriers and manufacturers it seems likely that the FCC and other U.S. regulatory bodies will still take more heed of the gospel of free enterprise than of the many warnings now being uttered in America on trans-border data flow.

The most recent call to take heed of what is happening, particularly in Europe, came at a meeting in Denver of auditors linked with the industry. A speaker for Computer Resource Controls pointed out the danger that indifference in the U.S. could lead to other countries insisting that databases be localised.

Eric J. Novotney, a security and privacy expert with that group, indicated that in France, for instance, a recent government investigation had shown that a U.S. group based in Cambridge, Massachusetts, held more organised

economic information on France than the French Government itself.

## Problems

It looks as if the problem is being solved at one end while being added to at the other. Now some of the large U.S. banks are joining in, to the great disgust of Adaspo.

And over the whole scene looms the shadow of IBM's Satellite Business System, together with comparable services planned by Xerox and Sperry Univac, among others. These are threat to existing large networks and to the very existence of hardware companies unable to compete in the same league. However fast the Europeans may stumble ahead, anything on these lines is unlikely to take shape as a European venture for at least five years.

This is despite the efforts being made individually and jointly by European nations on such schemes as Germany's electronic telex, the Nordic Data Network, the packet-switched network CTNE in Spain, Transpac in France and Euronet.

Facing these ventures are Tymnet, Telenet (Arpa), Compak (ITT) and the Bell value added network.

It would be a pity if, after all the great intellectual and technical effort put into the development of all these methods to improve communication, the result should be further division between the more advanced countries.

The large groups have accumulated priceless expertise on the running of high capacity communications links and maintaining their integrity over otherwise indifferent local services. This expertise is being tapped by other industries for their benefit. For example, quite recently Tymshare Incorporated, whose British offshoot is 33 per cent owned by Unilever, has just signed a £1m contract to provide a U.S. private data network for TRW. It will have 20 nodes and link more than 30,000 users of the group's credit services to a data base of consumer and business credit information.

This will be connected to the International Tymnet, the largest public packet network in

operation, functioning since 1971. It has 375 nodes (active communications processors) and provides access to 225 large host computers of 60 models with the ability to handle 2,200 simultaneous communications. Twenty two countries outside the U.S. are connected.

Another form of expertise is in the tackling of problems that other groups are loth or unable to solve. One instance is the taming of the Cray computer—the most powerful machine so far brought into operation—by United Computer Systems of Dallas which has enabled its UK subsidiary, London United Computing Systems to claim to be the first to offer commercial services on this amazing machine.

In a similar vein is the aid provided in America by UCC to Hughes aircraft which in August used the UCC computers at a Dallas centre to launch Western Union's third synchronous satellite into orbit.

This added Western III to the group's previous seven satellite projects and because

of the extremely tough requirement of launch and move to station, it is no small feather in UCC's cap, particularly as the Univac machines run by the latter were not employed solely on the launch. This job is in sharp contrast with the serried ranks of machines at Kennedy, Houston and Huntsville, all dedicated to NASA launches.

On this side of the Atlantic, it is essential to note the expansion of GSI which recently took over the CRC Information Systems Organisation. The aim of GSI, which is essentially French-based, is to become the highest service group in the UK by the turn of the decade. It already is in that position for the rest of Europe.

One of the services operated is for Infoline, the organisation set up in 1977 to create a major British technical, scientific and commercial database. The service is in the form of facilities management and will be worth several million pounds. So far, 6,000 Megabytes of Infoline information have been assembled.

It is not, therefore, a coincidence that GSI has become the first host bureau of Euronet after having been the first on the IPSS packet switching system—the UK Post Office's comparable system will be accessed soon. The main upshot is that any Euronet user can now gain entry to the Infoline data base, as one of the 100 or so bases available in the Euronet.

There is almost feverish activity taking place in communications/computing networks and the reason is not hard to find. Revenues from such activities are rising at a rate of 25 per cent annually—those of the world's six largest computer-builders are growing at just over half that rate, namely 13 per cent.

That Europe is lagging to the present extent must be attributed in a very large degree to the narrow-minded parochialism of the respective PTT organisations.

Ted Schoeters

## Technology

CONTINUED FROM PREVIOUS PAGE

problems is to help in the lengthy and sometimes difficult job of converting from one system to another. Computel is a past master at this and is offering customers a site on which they can gain hands-on experience of new ICL machines during the run-up to conversion with transfer taking place when the bureau and the user are satisfied that all is well.

MSP Software Products has just disclosed that it will be providing somewhat similar support, but with the new IBM 4300 series.

There is nothing yet in Britain to compare with the large distributed system projects being undertaken in America by GEISCO where users can have as many as 160 terminals and 800 data screens under the Marklink aegis. The end of the year should bring the number

of active users to close on 30.

Apart from supporting users' data needs, some groups are plunging deeply into direct hardware marketing, as witness the involvement of Gamma Associates in a fast additional store described as "solid-state disc memory." Compatible with the DEC machines on which Gamma bases a great deal of its activities—though there are many Series 1s to come—it is about 100 times faster than cartridge disc sub-systems.

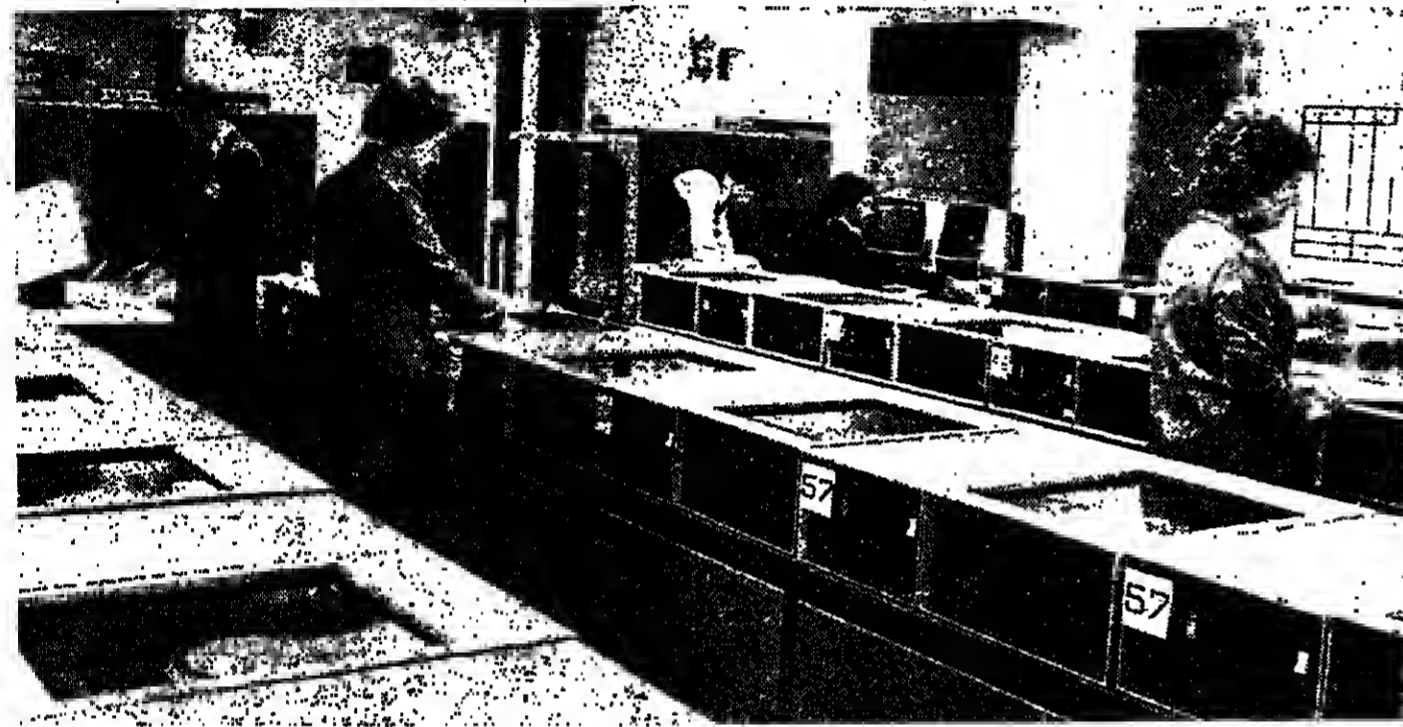
Some of the bureaux are plodding along in the same way as they were five years ago, supplying the traditional, reliable batch processing work they did then. And to those who might suggest to Data Sciences International that it is time they took to new technology, the management will

point to the Greene Report which puts them seventh in the list with profit margins of over 17 per cent after NMW Computers (28) ADP (22.14), Data Logic (22.10) Comshare (20.73) and Atkins On-Line (17.65 per cent).

One problem of concern to all suppliers of services is the continuing absence of any satisfactory means of protecting their heavy investment in software, particularly now that international trade in this intellectual commodity is so brisk.

An amendment to the present Copyright Act is long overdue and if the present administration did nothing more for the computer community than provide the needed protection, it would be remembered gratefully for many years to come.

T.S.



A section of the Unilever Computer Services Centre at Watford, where operators (in the foreground) are loading disk drives to run clients' computer programs. In the background are two of the centre's ITEL AS/5 main frames

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# Questions on maintenance

**HARDWARE MAINTENANCE** services for their customers provide suppliers of mainframe computers with as much as 30 per cent of their revenues. The major computer manufacturers employ what can only be described as small armies of service personnel and some of their biggest customer installations have enough engineers permanently sited there to make up a football team.

So it is not surprising that independent maintenance companies have sprung up to take some of this lucrative business, away from the major vendors by offering services that are sometimes more effective and nearly always less expensive—up to 30 per cent cheaper, in some cases.

Big IBM computer users, who outnumber all the others put together in most countries—Britain being one of the few exceptions—enjoy by far the best choice when it comes to deciding who is going to take care of their valuable hardware. Independent maintenance companies tend to concentrate on offering services to IBM users, not only because there are so many big IBM computers around, but also because IBM's attitude towards these third party maintenance firms is far more accommodating than that of most other big computer suppliers.

## Policy

Provided the computer is not rented, in which case it still belongs to IBM, the computer industry giant will allow its customer to bring in a third party to service the hardware, at least on IBM's own engineers, and will even supply manuals and spare parts to the user without being awkward. IBM's accommodating policy is largely the result of the U.S. Government's strict anti-trust laws which have also persuaded the company to provide service users for any kind of IBM hardware located almost anywhere and on almost any vintage regardless of whether it is rented, purchased, leased from a third party lessor or brought from a used computer broker. If the user wants IBM service, he receives it.

One type of user who tends to look elsewhere is the local "customer" with a "mixed" installation where there are peripheral bits, such as magnetic tape drives, card drives or line printers that are totally compatible with the IBM system but manufactured by an independent company. These plug compatible manufacturers (PSMs as they are called) usually have their own maintenance engineers who work at a customer's installation along side, but not always in total co-operation with IBM's engineers. There is seldom serious hostility between the two groups, but not surprisingly the job of identifying the cause of a system failure can be more protracted when the various engineers involved have expert knowledge of only part of the system. Hence, the attraction of a third party maintenance company that is free to maintain every piece of equipment on the site.

Probably the most impressive example in this country of a user with a mixed installation going to a third party maintenance company was when British Airways showed IBM's engineers the door just over three years ago and brought in Data Processing Customer Engineering (DPCE), an Australian based firm that was already taking care of the IBM hardware at Qantas. At the time, most of the peripheral equipment used with British Airways' IBM computers was already from PCMs.

## Decision

Also deciding last year to also dispose of the IBM central processors and to replace them with machines from the Amdahl Corporation which are able to run the programs from the IBM computers, more or less without modification, not even though Amdahl itself could have provided engineers to service its processors, BA decided that DPCE should take care of all its IBM compatible computer hardware and the airline renewed DPCE's contract in September 1978, for five years. The contract was worth £2m at 1978 prices over the five-year period.

Smaller manufacturers of computers that are compatible with IBM machines, such as the Magnuson Corporation which has just started selling its medium scale M80 machines in this country, can find third party maintenance firms very useful when they are breaking into new markets.

Magnuson, for example, has just sold two M80s to the Bangkok Bank in Thailand, as replacements for the bank's outdated IBM processors—and since Thailand is a new and remote territory for Magnuson the machines will be maintained there by a third party. In this case it is a firm called ITS, a subsidiary of SITA, the international network organisation.

No discussion of computer maintenance in Britain would be complete without mentioning ICL, and without pointing out that ICL's policies relating to third party maintenance—and, indeed, to maintenance in general, are regarded as being rather less accommodating than those of IBM.

## Spare

Mills Associates, a firm which services more than 50 ICL series computers all over the country, says it has never bought spare parts from ICL itself, preferring to acquire them from what it describes as "other sources" rather than depend on ICL as a supplier.

Similarly, DPCE, which now also provides servicing for the other previous generation of ICL machines, the System 4 series (because they are quite similar in technology to IBM machines), says that rather than buying from ICL it obtains its parts from old System 4s that have been scrapped. According to DPCE it would have to wait nine months for an item ordered from ICL itself, while electronic parts from old System 4s are as good as new.

The ICL equipment-user who decides to bring in an outside

maintenance firm has to pay ICL a one-off hire charge of £45 for the use of each service manual needed to keep his system running—and as many as 100 manuals can sometimes be required. Despite this extra expense, the services of a third party can still prove cheaper than ICL's, especially with older machines, because under ICL's standard contract the company only guarantees to maintain a machine for the first seven years of its life. At the end of that period a new maintenance contract can be drawn up, but the new charges will work out 20 per cent higher than before. Sometimes, they may simply decline to run the machine at all, even if it is still with its original owner.

## Problem

If the machine is second-hand and more than seven years old, ICL will normally refuse to maintain it, with the result that some used computer brokers have found themselves stuck with a warehouse full of old 1900s in good condition which potential users are reluctant to buy because ICL itself will not service them. Indeed, this ICL policy is the basis of one of several complaints that have been made about ICL to the Office of Fair Trading—complaints which could lead to an investigation by the Monopolies Commission.

But if a customer is prepared to accept third party maintenance on the old ICL machine the broker can make a sale, which is why such brokers tend to work in close co-operation with companies such as Mills Associates. Mills not only maintains old ICL machines in this country it also trains users of old ICL equipment in countries such as India where there is a demand that old machines be kept in operation, even though ICL itself would dearly love to replace them with gleaming new hardware.

Keith Jones



ITT employs more than 300 staff in its computer-based message handling system, which is based on a high-density mainframe computer of the group's ICL System 4.

# European airlines are a major target

## PROFILE Data Processing Customer Engineering

DATA PROCESSING Customer Engineering (DPCE), a member of the Datronics Group of Australia, seems to be striking it rich in the world of third-party maintenance.

DPCE—better known as "Deep Sea" to British Airways and Qantas—is making European airlines a key target.

When the Australian company ousted IBM from maintenance of £40m worth of equipment at Heathrow, it was regarded by some as a nine-day wonder and many queried whether DPCE would cope. But, according to Mr Geoffrey Veal, "BA's up-time has improved dramatically and the airline is receiving better hardware performance."

Mr Veal, who is chief executive of DPCE, says "the availability of the system is better and BA has been able to reduce the amount of hardware that it had on site, particularly magnetic tape devices."

Another advantage gained is that British Airways has been able to introduce a number of suppliers on the computer floor and now uses equipment supplied by IBM, Memorex, Amdahl, Intel, Collins and CCL. According to Mr Alan Jacobs, head of Computer Services at British Airways: "We are very satisfied with DPCE and they have done everything they claimed they would do. They have improved the hardware performance and have become integrated in our operation in such a way that this has made the whole operation flexible."

Since 1976, BA has probably saved £3m to £4m in acquisition of computer peripherals against purchase of IBM equipment. The big benefit is that the DPCE maintenance team, 31 in all, look after the total range of equipment.

"From the maintenance point of view it is the best-run computer installation in Britain," claims Mr Veal. "With British Airways we have an extremely good rapport; BA take a great deal of interest in their equipment and how it performs, so we both have common objectives, to ensure maximum uptime."

The original BA maintenance contract comprised IBM 370/188, 380/85, Univac 494 equipment and some add-on memory. IBM 380/85 and Univac equipment has now been phased out by Amdahl V6 and V7 plug-compatible processors. Another maintenance

contract with BA worth £5m to DPCE, has been signed for a further five years to September, 1983, and this covers the entire set of IBM and plug-compatible equipment.

Last year the Australian company was given Federal Government recognition and presented with the 1978 Export Award, an annual event to mark excellence in export achievement.

It all goes back to the early 1970s when Qantas felt that there were interface problems between the two maintenance suppliers, IBM and Honeywell, and in 1974 DPCE took over the Qantas contract with total maintenance responsibility. The company's expertise in maintaining the Qantas installation was a major factor in the BA switch from IBM to DPCE.

Success of both Qantas and BA in terms of independent maintenance is attributed by DPCE to the support and the relationship that engendered with customers. In Australia, Qantas is similarly organised to British Airways. The two sides have regular meetings with plenty of feedback. Sometimes some of the faults bring difficulties—there may be a software hitch, or hardware malfunction. The software support comes from BA or Qantas, and the hardware support from DPCE, so there is constant contact.

Except for IBM and some plug compatible suppliers, there are frequent difficulties when it comes to the supply of spare parts, maintenance documents and technical support. "Some suppliers have openly stated that they will make it sticky for us to get spares and this seems a strange attitude," comments Mr Veal. "But British Airways has been very good in looking after its interests and helps us in putting pressure on suppliers."

## Objective

Memorex has certainly co-operated with DPCE in Australia, and in the UK the relationship between them is good.

IBM behaves very professionally and support to DPCE is excellent, adds Mr Veal. IBM has an industry relations officer who makes sure that DPCE has the kind of service from IBM that it pays for. "To give IBM its due, a satisfied customer is number one objective regardless of who is doing the maintenance," comments Mr Veal.

But a lot of other manufacturers do not react with the same maturity. "They perceive us as an enemy and if they lose the maintenance they lose a lot of contact with the site and

ultimately, lose the equipment — although, they need have no fears in this regard," according to the DPCE executive.

Looking at the site itself, DPCE carries an enormous responsibility for doing the maintenance for BA. "If the equipment was down for any appreciable length of time, it would be catastrophic to the airline's operation worldwide," says Mr Veal. "BA might never recover, because just everything is on that computer — reservations, aircraft scheduling, crew scheduling, flight plans, and so on." However, there are tremendously effective fail-safe procedures worked into the software/hardware and operating systems and it would take a major catastrophe to lose the who's lot.

On the Qantas contract, DPCE has been having immense difficulties with one or two suppliers. Mr Veal suggests that some suppliers are "merely interested in making a one-time sale to the customer and they do not seem to have the maturity, as I mentioned earlier, that IBM has."

Due to the high cost of spare parts supplied by manufacturers, one of DPCE's operations is to provide second-source spares. One of the methods of

CONTINUED ON PAGE VI

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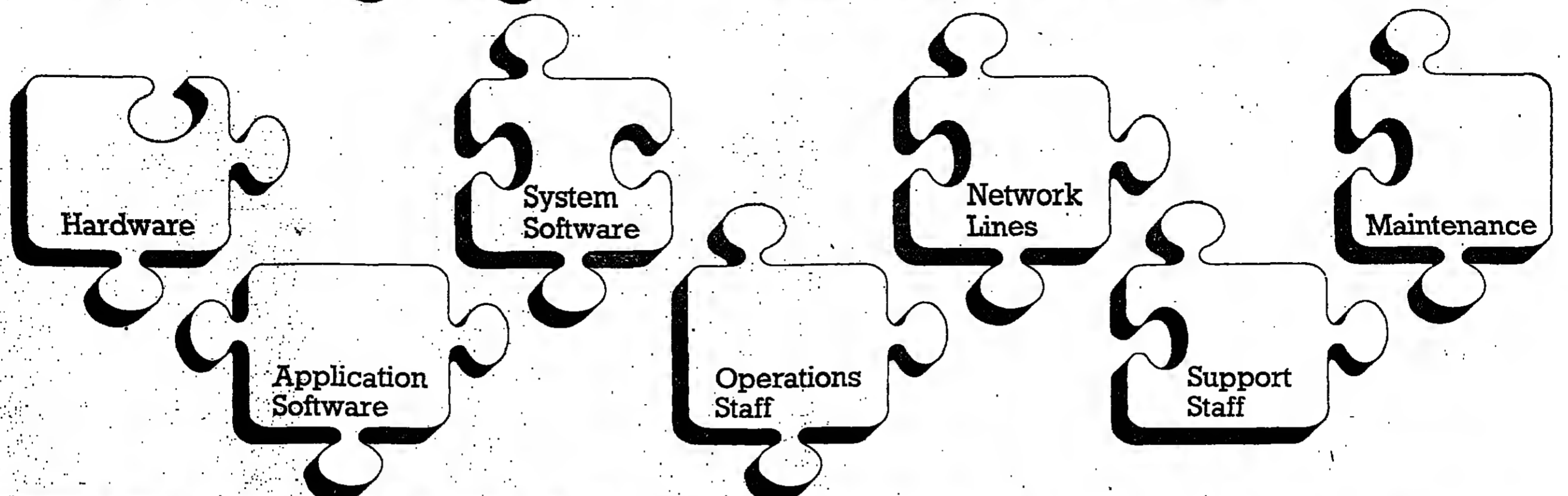


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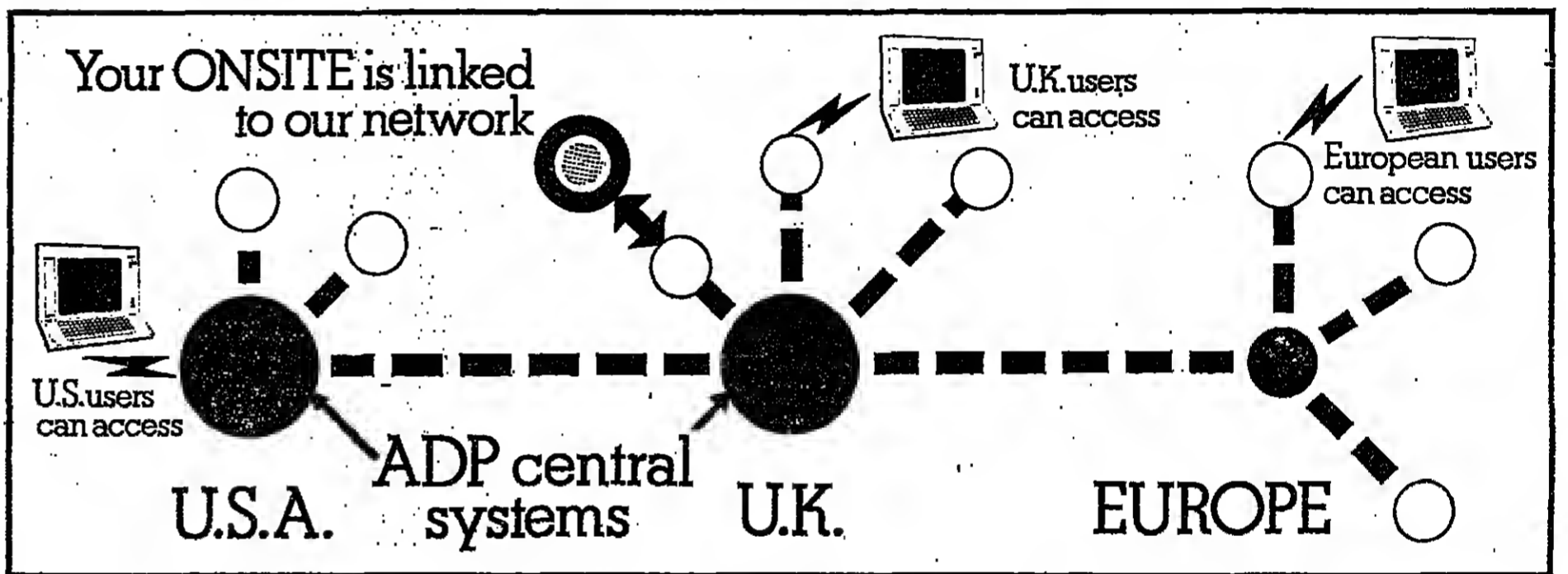
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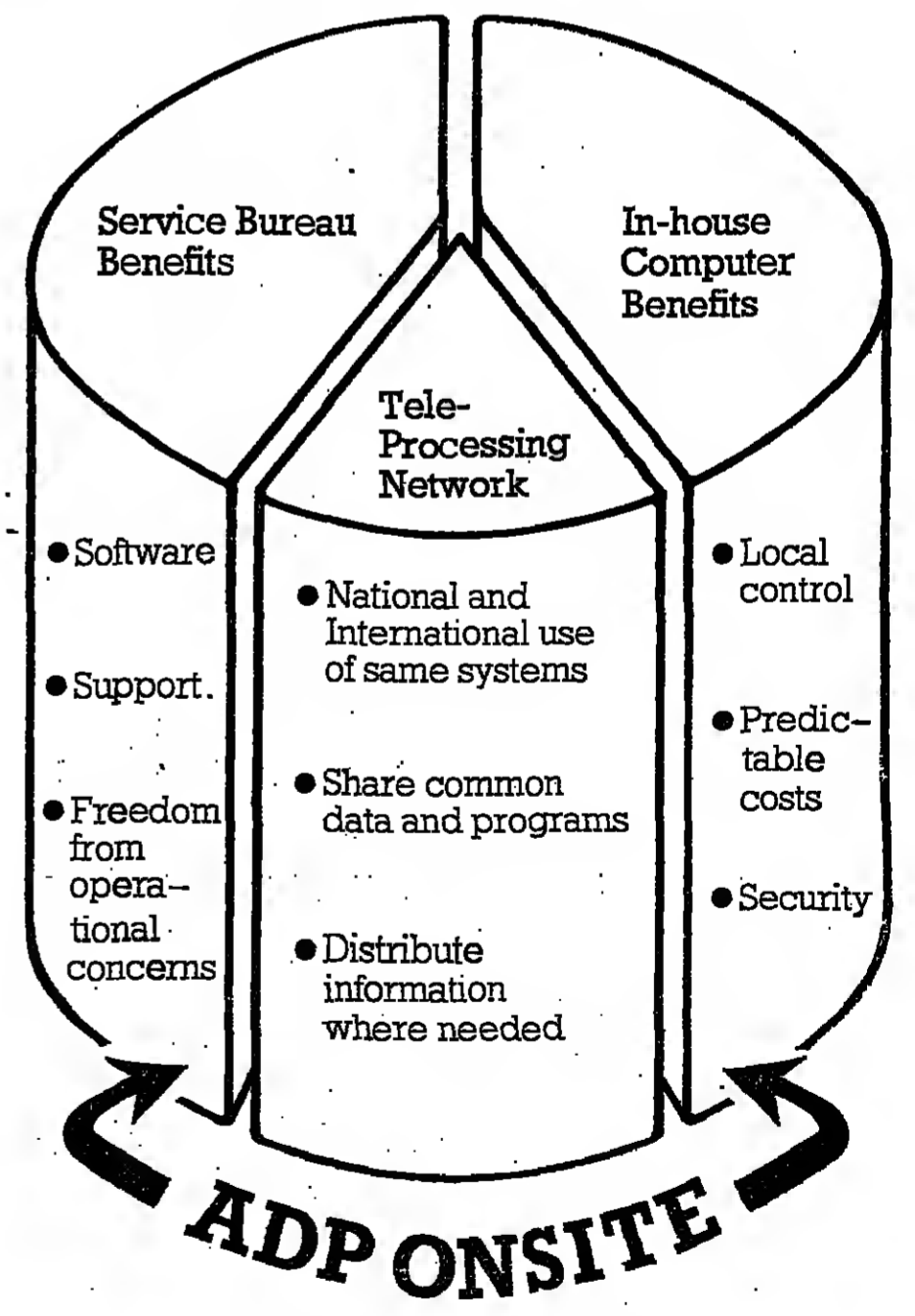
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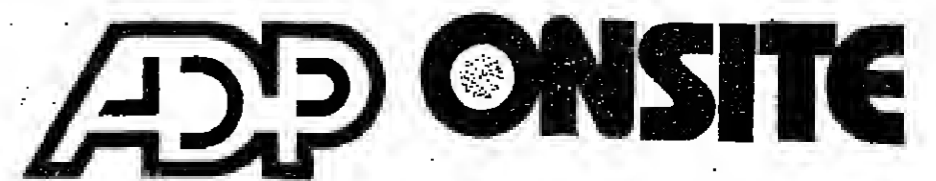
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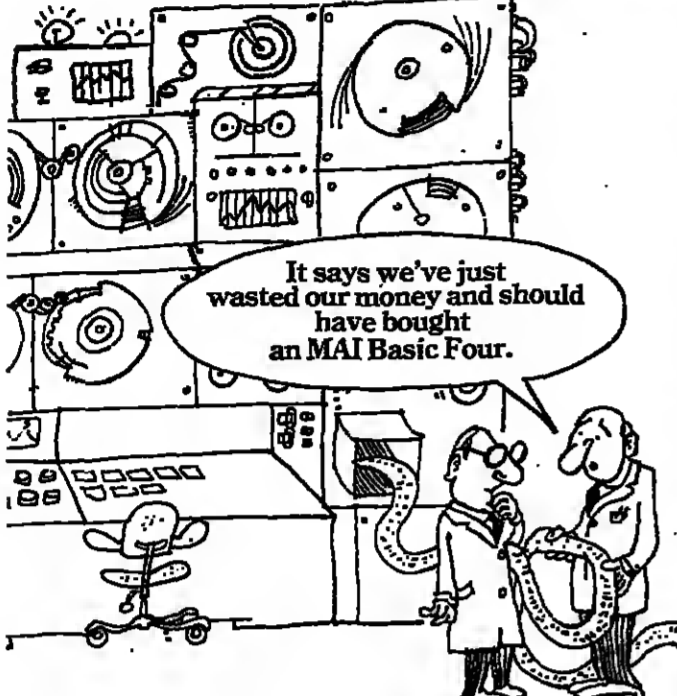
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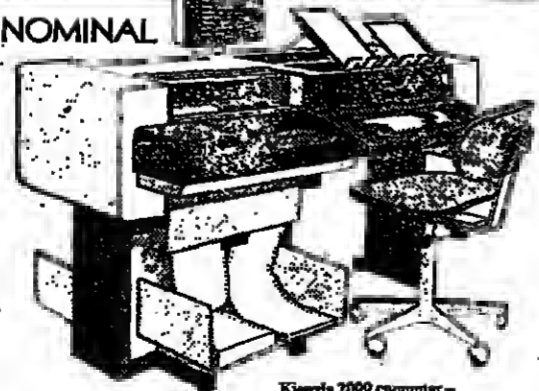
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AMONG THE more recent recruits to the computing service industry have been offshoots from the automotive world.

The stir caused by British Leyland's entry into the field arises because of its extensive long-term training efforts in the past, coupled more recently to aggressive plans using fibre-optic communications systems, microwave communication systems and other advanced techniques.

The BL Systems firm complements the Lucas Logic service in computer-aided design which has been steadily winning customers far from the automotive industry.

The rules governing the successful computing services firm have not changed at all in the past few years. What has happened is that new candidates from the blue-chip sector of British industry have emerged which are well-qualified to enter and expand in the computing services arena.

Ranks Hovis McDougall) when he remarked that "if you hire lion tainers, then you had better give them some lions to tame."

In RHM's case the taming activity centred on the management of communications for data, complete with the adapted software to suit variable traffic loads impacting a computer centre. It was this kind of experience which quite naturally led to the operation and extension of an information retrieval service run on behalf of the British Library.

Similar sets of skills, and a comparable pattern of resolving hardware and software problems under testing commercial pressures have given rise to both the BL and Lucas offshoots: The creation of outside customers, with their interests which are often far removed from the "family" industry serves to stimulate the skilled staff trained in various aspects of computing. In one company it has been talked of as "a continual exploration of many trades and industries, and, in some cases, of completely alien cultures."

## COMPUTER SERVICES VI

# Offshoots of the big users

Without such a challenge the staff would, perhaps, otherwise leave to join external computing services companies, thus depriving the training organisation of the greater value from the investment made in a person's most formative years. By creating a services offshoot in computing, the parent organisation is able to reverse the process by attracting "super-skills" which would otherwise always have to be hired from specialist firms.

### Affiliates

Observers of the international computing service scene will recall that all three U.S. aircraft builders — Boeing, Lockheed, and McDonnell Douglas have developed affiliates in computing. It is no accident that as computing has been generalised so that it is used and understood much more broadly in less avowedly high technology firms, so offshoots in computing should spring from a number of general industrial organisations.

However, those staff who find the exploration of the frontiers of computing, in itself, an absorbing task can remain employed within the parent structure and yet develop, either technically, or managerially, in a fast growing industry.

For example, the Lucas Logic design techniques have led to extensive use of its automatic model maker for containers; typically these are articles found on supermarket shelves and nothing at all to do with cars or trucks. The automatic model-maker derives its feeding data from the graphics displayed based studies and is itself controlled by a microprocessor. In this way, the real three dimensional prototype is rapidly produced from the more theoretical work carried out on the design computer system.

The early years of development within the computing service industry saw the first affiliates in this activity from major stock exchange names mostly derived from the financial sector. Perhaps the best-known name among this group is the Centre-file firm owned by the National Westminster banking group. This particular computing organisation has become a valuable training ground for managerial talent because of the very competitive nature of the market in computing services.

Since the banking world has a great need of well-rounded

young managers, the availability of a school for such talent which in itself is a profitable service business, is a major asset to the parent bank.

Among the very oldest service firms in computing are the affiliates of the BOC group and of British Petroleum. The BOC Datasolve group in computing has recently added a major software development firm in Software Sciences and this also adds a mechanical engineering support strata to the BOC bow by including Software Sciences Engineering within it, which has developed a system of computer support for design which merits attention.

From the BP umbrella, the two arms of Seicon are part of the 20-year-old fabric of computing services, spanning both bureaux operations and software and systems development. As more and more users of computing service firms seek to determine a stable source of computing skills to support applications which are crucial to the health of their businesses, the attractions of a firm which is based in a larger grouping become more compelling, year by year.

But the benefits of financial soundness extend to the matter of software supply for users. The topic of financial planning via computing has been extensively studied in the U.S. and it is wasteful to repeat the basic investment in Britain. The Hill

Samuel banking group subsidiary in computing services—Lowndes-Jax—is accordingly joined to UK market to U.S. sources of experience.

The further development of these techniques becomes more certain with pan-Atlantic support and users on both sides of the water will benefit. Although Lowndes-Jax sought this deal on its own initiative the backing of Hill Samuel must have encouraged the U.S. party to picking a European partner. Similar considerations tend to apply to deals with continental equivalents in computing services and these are becoming more common every month.

In some senses, it can be stated that the French set the pattern for the growth of the British computing "parental" strengths when, at the instigation of the French Government, several years ago, there were major consolidations in France, most of which secured an umbrella from existing financial or industrial complexes.

Although the era of the independent in computing services is never likely to come to an end, the balance of advantage has shifted markedly to groups simply because of the better understanding that exists of how to measure the performance of a computing entity, and how to plan for its growth.

Hedley Voysey

# Springboard for expansion

FEW COMPUTER bureaux regard themselves as being in the classic wholesaling mould any longer. That is to say, that their function of "breaking bulk" is a minor one, although that is historically where the idea of a bureau came from.

But since computing power is not confined to very expensive centres and is, now, through microcomputing and personal microcomputers available, in one form or another, to businesses at remarkably low levels of capital expenditure, the bureau in computing has taken on a new guise.

Basically, the current concept of a bureau rests on the ease and rapidity with which a user can tackle the next most urgent problem which has caught the attention of its senior management. A typical computer bureau has long since become accustomed to taking on board users which already have a computer within their organisation.

Several bureaux currently seek to reverse this process by building up a work load using the bureau machine and then, making a sale—as an agent—of a machine able to do much of this load without using the communications links to the bureau. For what has been discovered is the law of the exploding computing universe. However heavy the existing computing load, the list of desirable applications of computing is always greater than the set of what has been done so far.

Basically, the great access-

ibility of current computers has merely served to carry out the much-needed introduction of business to an understanding of what is feasible.

An extreme example of the connection between the very cheap personal computer, which can be bought through a large hi-fi store, and the large computing bureau, can be seen in the use of the personal machine to exploit its programmable competence so as to access several different bureaux.

The microcomputer and store contained in the personal machine can be used to ameliorate the diversity of procedures required to access different bureaux.

Several kinds of operating systems used by large central machines can be made to look very similar to the user of the personal computer. The microcomputer can also be used to remember the correct telecommunications rituals followed in differing countries and also to keep an accurate accounting log of which facilities have been used and exactly when.

As time goes on for a user of several bureaux, it becomes increasingly important that the terminal used should be able to insulate the using desk from nearly all the charges made to the services consumed through remote linkages. This creation of a stable floating platform for the user demands the use of a microprocessor within the terminal and the use of programs supplied by the bureau bidding custom as part of the connection service.

In the long run it is to be hoped that standardisation efforts will minimise the range of differences involved in switching from one network of computers to another. However, the competitive instincts of service firms will always ensure that what is finally attractive is likely to be slightly different in the context of the user.

The executives to computer bureaux tend to regard it as unthinkable that there is any final pattern to computing use.

What is more, they believe that the experience of careful costing, marketing, co-

tinuous development, education and sheer opportunity is an unbeatable guide for the business which wants to know just how to do anything related to computing. It has been the bureaux which have made all the running in letting users experiment with simply constructed databases, created from existing files which were however, not accessible to many users for development purposes.

### Strategies

The bureaux have through this (relatively expensive)-technique helped plan many longer term strategies for in-house development by organisations, which would otherwise have been left to conjecture as to what was useful as a database. Many users still transfer some files to a bureaux for special manipulation and interrogation. Several production management schemes would never have been designed to run on the user's own machines, the specification of which should be made easier by the pilot plant experience of using a bureau.

In some cases, the bureaux are investing in special development software to enable the development of systems to be appreciated by all grades of user staff liable to operate a visual display unit. This enables the differences in usage to be established between the regular display terminal operator, and the occasional user of such a display, who will need more help to ensure that correct answers are obtained from stored files.

The development of a variety of designs through visual display terminals to suit different parts of the system, and different classes of user, is easier

to do via bureaux. In some cases, the basic version of the final system is actually installed on very small business computers indeed, but the programming can take full account of the fact that the specification has been exhaustively experienced, as well as discussed, during the bureau based evolutionary phase.

In organisations where private forms of videotape are being planned and installed, it seems likely that connection of these services to an external bureau will be one of the better ways of establishing whether the computational enhancement of a videotape service is really desirable.

The British Post Office's public form of videotape, Prestel, poses a puzzle for the bureaux world. The slow development of this service means that it is difficult to see how connections to it might be

usefully planned. Since the costs of Prestel units are now much comparable to that of a personal computer, the Prestel development gain is seen by some purely as the availability of a connecting (via what is called a modem) to telephone lines which can be bought without direct remittance to the Post Office.

Since the Post Office has specifically stated that it does not regard the Prestel service as part of its monopoly, there is also a fear by some bureaux that private rivals to Prestel, intended however for public use, would come from the most multinationals in the industry. It is still quite unclear as to what kind of services would be legal through the public offering of rival services to Prestel.

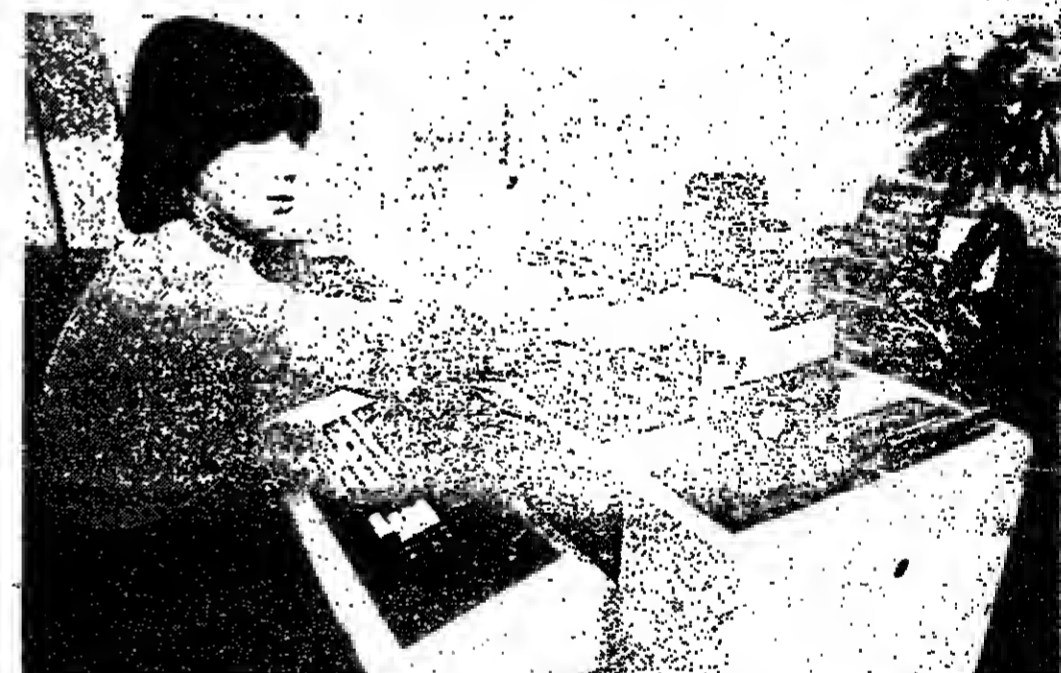
The impending clarification by the Department of Industry as to the extent of the monopoly exercised by the Post Office

would be welcome by the computing bureaux industry. However, it might lead them into a head-on clash with really massive technological companies.

For the time being, the bureaux welcome all developments which enhance the use of any type of computing. The struggle in the past has stemmed from the inability of many business executives to know what computing could do for them.

With this barrier down, the bureaux feel that building a market for their services, even though these have to be continually developed, is always possible. They believe that bureaux act as a springboard for expansion, development and the special service which is always her too difficult for the isolated individual to create.

Hedley Voysey



This visible-record computer in the Kienzle 2200 series (aimed primarily at the first time user) combines the advantages of magnetic stripe cards and floppy discs. The cards retain the benefits of having a hard copy record, while discs enable more than one record to be accessed simultaneously.

## Target

CONTINUED FROM PAGE IV

doing this is to purchase second-hand equipment which is then broken down into a spare parts inventory. The existing maintenance, as happened on one installation in Melbourne. The customer informed the supplier of his intention to change to DPCE and the end-result was that the supplier agreed to provide maintenance at a saving of \$30,000 a year on the current charge.

The very presence in the market place of companies such as DPCE appears to act as a catalyst and this has helped to stabilise maintenance prices.

Some of the moves to combat third party maintenance are interesting. IBM normally offers 12 months "free" maintenance in the selling price of the central processing units. Providing the intended purchaser of the equipment from any manufacturer insists that the supplier agrees to provide the necessary support, such as the provision of spares, documentation and training to a third party maintenance company, then the purchaser leaves his option open to use third party maintenance, if he wishes to do so.

At times DPCE is called in to "shake up" the existing maintenance, as happened on one installation in Melbourne. The customer informed the supplier of his intention to change to DPCE and the end-result was that the supplier agreed to provide maintenance at a saving of \$30,000 a year on the current charge.

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chase agreement has been signed. DPCE points out.

As has been successful in selling software packages worldwide and Saudi Arabian Airlines has been sold a management facility for its reservations system which is run on BA equipment at the West London Terminal which DPCE maintains.

The majority of airlines in the world have purchased their equipment from IBM mainly because of the PARS/IPARS reservation system. DPCE has the European airlines in its sights but intends to tackle the U.S. market and will be talking to a number of large American airlines.

Another avenue for the maintenance company will be the U.S. Government agencies. Diatronics has an operating company in Manila and Singapore, where it has had talks with the South East Asian airlines on third party maintenance. In Hong Kong, the company is looking into the possibility of marketing small business computers and word processing equipment.

New business for the company in Britain is progressing and the sign of a contract with Exeter University heralds the UK division's entry into the ICL System 4 market.

Marlene Brown

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Table of authorised unit trusts, including Abbey Unit Tr. Mgrs. (a), Friends' Provid. Unit Tr. Mgrs., and others, with columns for fund names and values.

Mutual Unit Trust Managers (a)(g)

Table of mutual unit trust managers, including National and Commercial, National Provident Unit Tr. Mgrs., and others, with columns for fund names and values.

Ridgfield Management Ltd.

Table of Ridgfield Management Ltd. funds, including Ridgfield Income, Ridgfield Growth, and others, with columns for fund names and values.

OFFSHORE & O'SEAS FUNDS

Table of offshore and overseas funds, including Alexander Fund, Keyser Urmann Ltd., and others, with columns for fund names and values.

INSURANCE & PROPERTY BONDS

Table of insurance and property bonds, including Abbey Life Assurance Co. Ltd., London Alliance & Nth. Bk. Assur. Ltd., and others, with columns for company names and values.

NOTES: Information regarding the accuracy and reliability of the data provided in the tables.



FT SHARE INFORMATION SERVICE

BRITISH FUNDS

Table of British Funds with columns for Name, Price, and % Chg.

Over Fifteen Years

Table of funds with performance over 15 years.

Over Ten Years

Table of funds with performance over 10 years.

Over Five Years

Table of funds with performance over 5 years.

Over Three Years

Table of funds with performance over 3 years.

Over One Year

Table of funds with performance over 1 year.

Over Six Months

Table of funds with performance over 6 months.

Over Three Months

Table of funds with performance over 3 months.

Over One Month

Table of funds with performance over 1 month.

Over One Week

Table of funds with performance over 1 week.

Over One Day

Table of funds with performance over 1 day.

FOREIGN BONDS & RAILS

Table of foreign bonds and rails with columns for Name, Price, and % Chg.

AMERICANS

Table of American stocks with columns for Name, Price, and % Chg.

CANADIANS

Table of Canadian stocks with columns for Name, Price, and % Chg.

BANKS AND HIRE PURCHASE

Table of banks and hire purchase companies with columns for Name, Price, and % Chg.

BANKS & HP—Continued

Continuation of banks and hire purchase companies table.

BEERS, WINES AND SPIRITS

Table of beer, wine, and spirit companies with columns for Name, Price, and % Chg.

BUILDING INDUSTRY, TIMBER AND ROADS

Table of building, timber, and road companies with columns for Name, Price, and % Chg.

COMMONWEALTH & AFRICAN LOANS

Table of commonwealth and African loans with columns for Name, Price, and % Chg.

LOANS

Table of various loans with columns for Name, Price, and % Chg.

Public Bond and Ind.

Table of public bonds and industrial shares with columns for Name, Price, and % Chg.

Financial

Table of financial companies with columns for Name, Price, and % Chg.

Over Fifteen Years

Table of financial companies with 15-year performance.

Over Ten Years

Table of financial companies with 10-year performance.

CHEMICALS, PLASTICS—Cont.

Table of chemical and plastic companies with columns for Name, Price, and % Chg.

DRAPERY AND STORES

Table of drapery and store companies with columns for Name, Price, and % Chg.

ELECTRICALS

Table of electrical companies with columns for Name, Price, and % Chg.

CHEMICALS, PLASTICS

Continuation of chemical and plastic companies table.

ENGINEERING MACHINE TOOLS

Table of engineering and machine tool companies with columns for Name, Price, and % Chg.

CHEMICALS, PLASTICS

Continuation of chemical and plastic companies table.

ENGINEERING—Continued

Continuation of engineering companies table.

HOTELS AND CATERERS

Table of hotels and caterers with columns for Name, Price, and % Chg.

INDUSTRIALS (Miscel.)

Table of miscellaneous industrial companies with columns for Name, Price, and % Chg.

FOOD, GROCERIES, ETC.

Table of food, grocery, and other companies with columns for Name, Price, and % Chg.

FOOD, GROCERIES, ETC.

Continuation of food, grocery, and other companies table.

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Continuation of food, grocery, and other companies table.

Table of food, grocery, and other companies with columns for Name, Price, and % Chg.

HOTELS AND CATERERS

Table of hotels and caterers with columns for Name, Price, and % Chg.

INDUSTRIALS (Miscel.)

Table of miscellaneous industrial companies with columns for Name, Price, and % Chg.

FOOD, GROCERIES, ETC.

Table of food, grocery, and other companies with columns for Name, Price, and % Chg.

FOOD, GROCERIES, ETC.

Continuation of food, grocery, and other companies table.

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MINES-Continued AUSTRALIAN

Table listing Australian mining stocks with columns for Stock, Price, and other financial metrics.

TINS

Table listing tin stocks with columns for Stock, Price, and other financial metrics.

COPPER

Table listing copper stocks with columns for Stock, Price, and other financial metrics.

MISCELLANEOUS

Table listing miscellaneous stocks with columns for Stock, Price, and other financial metrics.

GOLDS EX-GRAND PREMIUM

Table listing gold stocks with columns for Stock, Price, and other financial metrics.

NOTES

Notes section providing detailed information and disclaimers regarding the data presented in the tables.

REGIONAL MARKETS

Text providing information about regional market data and its availability.

OPTIONS

3-month Call Rates

Table listing 3-month call rates for various regions and currencies.

FINANCE, LAND-Continued

Table listing finance and land stocks with columns for Stock, Price, and other financial metrics.

OILS

Table listing oil stocks with columns for Stock, Price, and other financial metrics.

OVERSEAS TRADERS

Table listing overseas trader stocks with columns for Stock, Price, and other financial metrics.

RUBBERS AND SISALS

Table listing rubber and sisal stocks with columns for Stock, Price, and other financial metrics.

INDIA TEAS

Table listing Indian tea stocks with columns for Stock, Price, and other financial metrics.

Sri Lanka

Table listing Sri Lanka stocks with columns for Stock, Price, and other financial metrics.

MINES

CENTRAL RAND

Table listing Central Rand mining stocks with columns for Stock, Price, and other financial metrics.

EASTERN RAND

Table listing Eastern Rand mining stocks with columns for Stock, Price, and other financial metrics.

FAR WEST RAND

Table listing Far West Rand mining stocks with columns for Stock, Price, and other financial metrics.

O.F.S.

Table listing O.F.S. stocks with columns for Stock, Price, and other financial metrics.

FINANCE

Table listing finance stocks with columns for Stock, Price, and other financial metrics.

DIAMOND AND PLATINUM

Table listing diamond and platinum stocks with columns for Stock, Price, and other financial metrics.

CENTRAL AFRICAN

Table listing Central African stocks with columns for Stock, Price, and other financial metrics.

INVESTMENT TRUSTS-Cont.

Table listing investment trusts with columns for Stock, Price, and other financial metrics.

PROPERTY-Continued

Table listing property stocks with columns for Stock, Price, and other financial metrics.

SHIPPING

Table listing shipping stocks with columns for Stock, Price, and other financial metrics.

SHOES AND LEATHER

Table listing shoes and leather stocks with columns for Stock, Price, and other financial metrics.

SOUTH AFRICANS

Table listing South African stocks with columns for Stock, Price, and other financial metrics.

TEXTILES

Table listing textile stocks with columns for Stock, Price, and other financial metrics.

TOBACCO

Table listing tobacco stocks with columns for Stock, Price, and other financial metrics.

TRUSTS, FINANCE, LAND

Table listing trusts, finance, and land stocks with columns for Stock, Price, and other financial metrics.

FINANCE, LAND, etc.

Table listing finance, land, and other stocks with columns for Stock, Price, and other financial metrics.

PROPERTY-Continued

Table listing property stocks with columns for Stock, Price, and other financial metrics.

LEISURE

Table listing leisure stocks with columns for Stock, Price, and other financial metrics.

MOTORS, AIRCRAFT TRADES

Table listing motor and aircraft trade stocks with columns for Stock, Price, and other financial metrics.

Commercial Vehicles

Table listing commercial vehicle stocks with columns for Stock, Price, and other financial metrics.

Components

Table listing component stocks with columns for Stock, Price, and other financial metrics.

Garages and Distributors

Table listing garage and distributor stocks with columns for Stock, Price, and other financial metrics.

NEWSPAPERS, PUBLISHERS

Table listing newspaper and publisher stocks with columns for Stock, Price, and other financial metrics.

PAPER, PRINTING

Table listing paper and printing stocks with columns for Stock, Price, and other financial metrics.

ADVERTISING

Table listing advertising stocks with columns for Stock, Price, and other financial metrics.

PROPERTY

Table listing property stocks with columns for Stock, Price, and other financial metrics.

INSURANCE

Table listing insurance stocks with columns for Stock, Price, and other financial metrics.

INSURANCE-Continued

Table listing insurance stocks with columns for Stock, Price, and other financial metrics.

PROPERTY-Continued

Table listing property stocks with columns for Stock, Price, and other financial metrics.

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INDUSTRIALS-Continued

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Call for OECD accounting body

BY MICHAEL LAFFERTY, THE ORGANISATION for Economic Co-operation and Development should take a leading role in the development of international accounting standards, an inter-governmental working group recommends.

The group's report says that present arrangements for harmonising accounting standards are not satisfactory. It criticises the International Accounting Standards Committee, set up by accounting bodies around the world to promote international accounting standards.

The report, which will be discussed at an OECD meeting in Paris next week, calls for the establishment of a "Permanent Co-ordination Group on International Financial Reporting."

Unacceptable

A further UN group has recently been formed, but so far progress has been very slow. Accountants concerned with the work of the International Accounting Standards Committee are not enthusiastic about the OECD proposals, saying that the involvement of governments in accounting development can only be counter-productive.

Broader forum

The report says the proposed co-ordinating group would provide "a broader forum than at present exists among OECD countries for discussing and comparing accounting standards, both those which exist and, more importantly, those which are being developed by national standard setting bodies, by the IEC and by IASC."

Continued from Page 1

Wealth

applied to taxable income of over £30,000 a year. Within this group roughly 24,000 were liable at the top rate of 98 per cent on their top slice of investment income, after taking account of the 15 per cent surcharge.

VSO school service ends

VOLUNTARY Service Overseas says its programme of sending school leavers abroad has been stopped because candidates lacked the skills needed in developing countries.

Public-sector share of output likely to remain unchanged

BY PETER RIDDLE, ECONOMICS CORRESPONDENT

THE PUBLIC-SECTOR share of expected total output in the next 18 months is likely to show little change from present levels when detailed expenditure plans for 1980-81 are published, probably in six to eight weeks' time.

The result of the Whitehall review is that the volume of public expenditure will be held quite close to this year's expected level, which in turn is roughly the same as last year's expenditure.

But total economic activity is expected to be flat in 1980, so that public spending should remain at about its present share of Gross Domestic Product, about 41 to 42 per cent.

Treasury Ministers hope that the public sector share of GDP can be reduced from 1981-82 onwards, both as a result of a recovery in output and after a real cut in the volume of expenditure.

But details of the later years are still not settled.

The disclosure of the spending plans for 1980-81 is only one of a series of major announcements on economic policy due from the Government within the next two months.

Decisions, for example, must be taken about whether the present monetary target is to be rolled forward a further six months, and about the future of the correct controls on the banks' operations, at present due to expire at the end of the year.

Lengthy discussions are under way in Whitehall about the best way of presenting these decisions in a coherent way, especially as Ministers are concerned to stress as strongly as possible what they see as the seriousness of the position.

The issue is unresolved, but the most likely option seems that the announcement will be split in two.

A short White Paper may be published at the end of next month, or in November, which includes the spending plans for

1980-81, and short-term monetary decisions and economic forecasts until the end of 1980, which statutorily have to be published in the autumn.

A second White Paper, including the spending plans for 1981-82 and the following years and any medium-term monetary and borrowing targets, would then be published a couple of months later.

Alternatively, the shorter White Paper could include all the economic announcements, with the longer one covering the spending plans.

The obstacle to bringing the two announcements together is that there is a continuing Cabinet debate about the scale of public-sector manpower savings in the early 1980s.

There are also significant differences of opinion in the Treasury about the desirability and form of any detailed medium-term targets for public-sector borrowing and the

money supply. Both decisions will take some time. Work, however, is virtually complete on the 1980-81 plans.

Although expenditure is being held at this year's level in real terms, this has involved cancellation of the increase of just over 2 per cent both this year and next proposed by the Labour Government, as well as offsetting some of the cost of the big rise in public-sector pay.

Spending departments were originally asked to prepare options on the basis of either reductions from previous plans of 7½ per cent, or of the proposals prepared by the Conservatives in Opposition.

But the resulting total was still too high, mainly though not entirely because of public-sector pay rises.

The result was that departments were asked to produce a further 5½ per cent. Many spending Ministers appear to have been annoyed by this extra request.

Left may bring Labour battle to constituencies

BY RICHARD EVANS, LOBBY EDITOR

LEFT-WING activists in the Labour Party are pressing for representatives of local constituency parties to play a full part in the proposed inquiry into Labour's structure and organisation.

The demand was made yesterday by the Labour Co-ordinating Committee. If successful it would probably mean the inquiry would be more Left-dominated than predicted.

The tactic confirms the growing impression of many Labour MPs that the anguished debate over control of the party appears to be going the Left's way. Mr. James Callaghan cannot be as confident as he was of fending off attempts to change significantly the party constitution at next month's Brighton conference.

In a major speech at Swansea on Wednesday the Opposition leader is expected to launch a further appeal for unity, and to argue that Left-wing demands for changes in the procedure for electing a leader, the automatic

re-selection of MPs in each Parliament, and control of the drafting of the manifesto should be shelved until the inquiry is concluded next year.

Everything will depend on the attitude of the main unions, because of their block votes. The Transport and General Workers' Union is expected to instruct its delegation this week to support the constitutional reforms, and the vote of the Amalgamated Union of Engineering Workers could be crucial.

Also ominous for Mr. Callaghan is the likely composition of the inquiry into party structure. There is a clear Left-wing majority among the five trade union leaders already chosen. A sub-committee of Labour's NEC formed last week to examine the scope of the inquiry and its party membership is also Left-dominated.

So even if Mr. Callaghan succeeds with trade union help in preventing constitutional changes at Brighton, the Left

believes it will succeed in its aims well before the next election.

The Labour Co-ordinating Committee, composed of Left-wing MPs and activists led by Mr. Michael Meacher, a former junior Minister and Miss Frances Morrell, an aide of Mr. Anthony Wedgwood Benn, wants local constituency parties to have a say in the inquiry equal to the unions.

Mr. Meacher has written to all local parties urging them to press for five representatives to be chosen by ballot and for the constitutional changes to be made at the party conference.

He has also written to Mr. Frank Allaun, chairman of the Labour Party, praising the financial generosity of the trade unions, but arguing that local parties raised just as much money, even though most of it did not appear in the central accounts. They should nevertheless have an equal say on the party's future.

Government economic policies cause sharp CBI divisions

BY PHILIP BASSETT, LABOUR STAFF

SHARP DIVISIONS among industrialists over the impact of the Government's economic policies on business prospects are emerging among resolutions being lodged for the Confederation of British Industry's annual conference at the beginning of November.

Considerable concern is voiced about the high levels of sterling and interest rates, although this will be partially offset at the conference by calls for industry to respond positively to the environment being created by the Government's Budget incentives.

The main complaints are likely to come during the first morning of the conference in

Birmingham on November 5 and 6, when the economic situation and the Government's relationships with industry will be debated. Subjects covered during these debates will include energy shortages and pay negotiations.

The conference organisers want the main theme of the two days to be the "challenge for management," and will follow the first two debates with sessions on how industry should cope with new technology and how it should respond to Government policies.

This will set the scene for the second day's debates, which will be taken-up with the report of the CBI working party headed

by Sir Alex Jarratt of the Reed Group on how the balance of power should be changed between capital and organised labour.

The idea of setting up an employers' strike insurance fund will be considered in this session.

But with seven weeks to go before the conference, it is too early to estimate how much criticism the Government will face over its economic policies.

What is certain is that there will be considerable concern about the level of sterling's impact on exports, although industry's worries have been slightly tempered by the recent fall

Manpower shortage hits output

ACUTE AND growing labour shortages are the main reasons for the UK's low industrial output, says a report on manufacturing in the South East out today.

The survey by the London Chamber of Commerce and Industry, is broadly supported by the employers' organisation, the Confederation of British Industry, and by the Manpower Services Commission.

According to the commission, known job vacancies in Greater London in June were at a five-year peak of 62,000, while the total of registered unemployed, at 130,000, was the lowest for four years.

The CBI said it had no figures for the South East but that information from its members also confirmed growing shortages of unskilled and skilled labour, in areas of dense population.

The worst hit sectors, says the London Chamber of Commerce, are clothing, timber, metal goods and electrical engineering.

Its latest trend survey of manufacturing industry, carried out three times a year, states that "a massive 95 per cent of companies reported restrictions on output due to labour shortages during the February to May" period. This compared

with 24 per cent of companies in a survey at the beginning of the year.

Lack of demand was cited by 40 per cent of companies as a serious restriction of output. Labour was particularly scarce in engineering, with 50 per cent of mechanical engineering reporting substantial difficulties in recruiting.

More than half the companies report that investment next year will increase capacity, but this new investment will not necessarily lead to new jobs. Eight per cent of companies say that any new investments made will be at the cost of a reduction in jobs.

Oil effects

monetary targets should not be sacrificed. "Short-term inconsistencies between such fiscal actions and monetary objectives might best be resolved through increases in nominal interest rates, in the expectation that these would subside with reduction in the rate of inflation."

The annual report displays particular concern over the plight of the non-oil developing countries. One remedy, it says, would be for the industrialised countries with payments surpluses to take "all feasible steps" to improve their position as capital exporters and for all

industrialised countries substantially to raise their foreign aid. The oil increases, the IMF finds, have reversed what had been an encouraging trend to greater equilibrium in international payments. The payments surplus of the oil producing countries, which had dropped to only \$6bn last year, will rise to an estimated \$43bn in the present calendar year and to over \$50bn in the 12 months starting last July.

At the same time the industrialised nations are likely to enjoy a payments surplus of about \$10bn this year (against

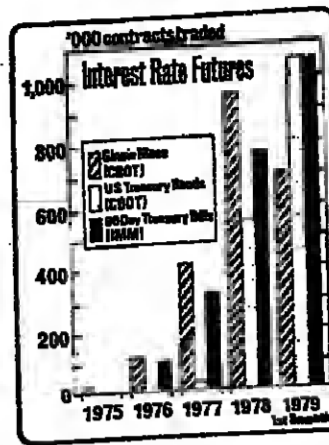
\$33bn in 1978) while the non-oil developing countries should see their collective deficit increase from \$11bn to \$43bn.

The oil price increases will also, it is estimated, add 14 per cent to the rate of inflation of the oil importing countries and knock between two-thirds and three-quarters of a cent off their growth rate, although multiplier effects in some countries could make the impact much worse.

As a group, the industrialised countries should experience a 3 per cent growth this year compared with 4 per cent in each of the two previous years. Details, Page 3

THE LEX COLUMN

Interest rates by the car load



On the floor of the Chicago Mercantile Exchange, America's second largest commodities exchange, the local traders wear badges proclaiming "Free markets for free men" and are just as bappy trading treasury bill futures as live cattle.

Until this year the established financial community in such places as New York and London either dismissed what was happening in Chicago as outright speculation or completely ignored it. Now, however, there are signs that the financial establishment has woken up to the fact that the Chicago commodity exchanges have hatched a financial revolution the extent of which is only starting to become clear.

To put what has been happening into perspective it is necessary to go back to the early 1970s and the advent of floating exchange rates. Milton Friedman, the Chicago economist, suggested to the Chicago Mercantile Exchange (CME) that individuals should be able to protect themselves against volatile movements in exchange rates and just as easily as farmers could use the commodity futures market to protect themselves against sharp moves in grain prices. Commodity futures trading, he argued, provided an ideal technique for transferring financial risk wherever there was the threat of volatile price movement.

Chicago initiative

The CME responded to Friedman's prompting by establishing the International Monetary Market (IMM) which started trading commodity futures contracts in several European currencies in 1972. Meanwhile, the CME's larger rival, the Chicago Board of Trade (CBOT) of a futures contract based on the Dow Jones Industrial average. Once again the idea was to use commodity future techniques to give the investor a way of transferring or "laying off" risks. However, this idea did not take off, although it is once again being studied.

Instead, the CBOT launched the Chicago Board Options Exchange — a securities-based change — a securities-based options market based on a marriage of commodity futures and securities markets techniques. This has proved outstandingly successful.

The next development was again pioneered by the CBOT — a futures contract based on interest rates. The first contract — Government National

Mortgage Association certificates (Ginnie Maes) — has proved very attractive to all sorts of investors that want to protect themselves against interest rate fluctuations. It was soon followed by a treasury bill futures contract from the IMM (equally successful) and there is now a whole string of futures contracts ranging from commercial paper to long-term bonds.

The phenomenal success of both the options and financial futures markets has not been lost on America's hard-pressed conventional securities markets. Options trading volume has soared from 1.1m contracts in 1973 (the first year of trading) to 57.2m contracts last year, and turnover on the IMM has jumped from 0.3m contracts in 1974 to 5.1m last year. The success has been reflected in the costs of membership of the respective exchanges. The price of a seat on the New York Stock Exchange (NYSE) — America's largest stock exchange, has fallen from \$335,000 to \$125,000 since 1967, while the cost of a seat of the Chicago Board of Trade, America's largest commodity exchange, has risen from \$21,000 to \$225,000 over the same period.

Rather belatedly the stock exchanges have decided that they should be in the options and futures business if they are to protect their members' interests. The American Stock Exchange (Amex) started trading options in 1975 and last year set up a financial futures exchange known as Ace which boasts that "it's not a farmer's market."

So far ACE has not been very successful, but the entry of the NYSE into futures trading could well be another matter. It is planning to open its own specialist financial futures exchange next spring which will offer several currency and interest rate futures contracts. It has recruited the former head of the CBOE and, judging by the amount of money it is spending intends to make a big impact. In addition, the NYSE

has indicated that it would like to trade options which has prompted the CBOE to say that it would like to trade in ordinary shares.

The common thread running through all the ideas is that investors would like to quantify and protect themselves against risk and both the options and futures market provide them with a useful tool. When interest rates were more stable and the equity market provided an adequate return there was less need, but the more volatile financial conditions now prevailing in the U.S. have heightened investor awareness of the need for some sort of price protection or insurance.

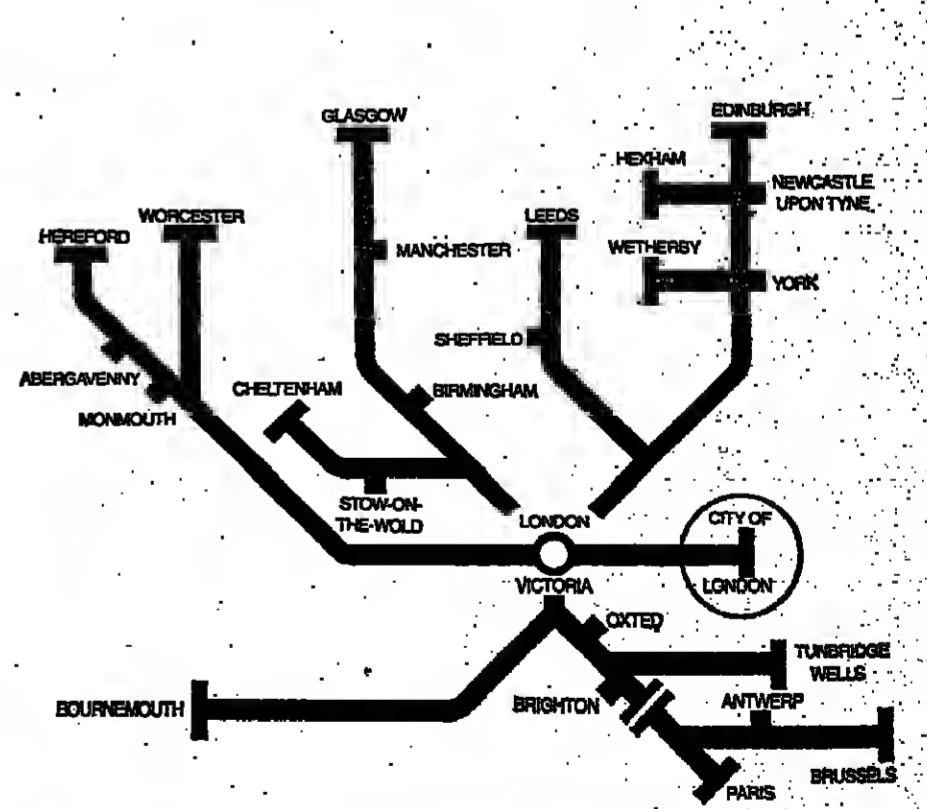
Not all the financial futures contracts currently being traded on the drawing boards will be successful but it is already clear that some of the existing contracts are already having an influence on the underlying cash markets and are here to stay. Gold and treasury bills are just two examples.

Investors have found, often to their surprise, that the futures markets are often more liquid than the cash markets. And over time it normally happens that the turnover on a futures market exceeds the turnover in the underlying cash market.

Most of the big Wall Street brokerage houses have decided to become actively involved in these new markets and following the recent joint report of the Federal Reserve and the Treasury (which gave a qualified seal of approval) the big money centre banks are also starting to move in, as are the pension fund managers and the corporate treasurers.

The next big leap forward, planned by the commodity exchanges, is into equity based futures contracts. Again the idea is to offer investors the means of protection against volatile swings in share prices. The long-term implications of moves such as this are far from clear but it seems as if the techniques of commodity trading are rapidly encroaching on those of the stock market. This would have profound consequences not only for the regulation of America's financial markets but also their structure.

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